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ARIZONA HIGHWAYS

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Earl Ford McNaughton

Red Riding, *by Ann Taylor. Oil on canvas, 90 by 52 inches. Courtesy of Gallery Henoch, New York, New York.*

Towering thunderheads over the Sonoran Desert. **John Schaefer**

The Desert

The desert is one place where, at first glance, things are not just what they appear to be.

This vast country lays its story out before you. Brightly colored bands of strata, pushed up from the earth's mantle at crazy diagonals, form fresh mountains. Colors and textures, elsewhere seemingly hidden, sparkle here in crimsons, ochres, and whites, while thick purples, dusky iron-reds, and volcanic blacks define and sharpen this landlocked rainbow. Great sandstone monuments chart the prevailing winds with scribed lines. The occasional rains form gigantic tapestries of dark desert varnish stains. Top-heavy hard stones balance upon minuscule remains of softer substrata. Millions of years of great geological churning and undulating are frozen in this moment. With sharp rocky outcroppings, mountains, range upon range, relentlessly pursue the horizon.

In that diffused distance where land and sky join, the immense celestial canopy begins. Faint at the base, the clear blue gathers intensity as it climbs through a few light cottony clouds to its ceiling of deep cobalt blue. In sharp contrast, the white-hot disk observes our planet's gentle turning. The sun lives closer here... and life's rhythms are compliant. Survival depends upon harmony with the land. The sun's strength in this clear desert air, its light searing and direct, presses creatures underground or into shade. Life systems slow down with only the flowers bravely staring at the solar passage.

Before the 20th century, southwestern deserts were deemed hostile and desolate wastelands. In 1901 John C. Van Dyke expressed his impressions of the desert with inspired prose in the classic *The Desert*, reexamined this month for us by Dr. Lawrence Clark Powell.

Our co-feature by Don Dedera is a masterful guided tour through the Arizona-Sonora Desert Museum, an outdoor-indoor living museum which displays the flora, fauna, and geology of the great Sonoran Desert.

Also drawn to the beauty of our desert is artist Ann Taylor, whose works add fluid color and movement to our desert dimensions this month. Together with our photographers, writers, artists, and editors, we invite you to listen carefully... to the quiet voice of the desert. □

Gary

ARIZONA HIGHWAYS

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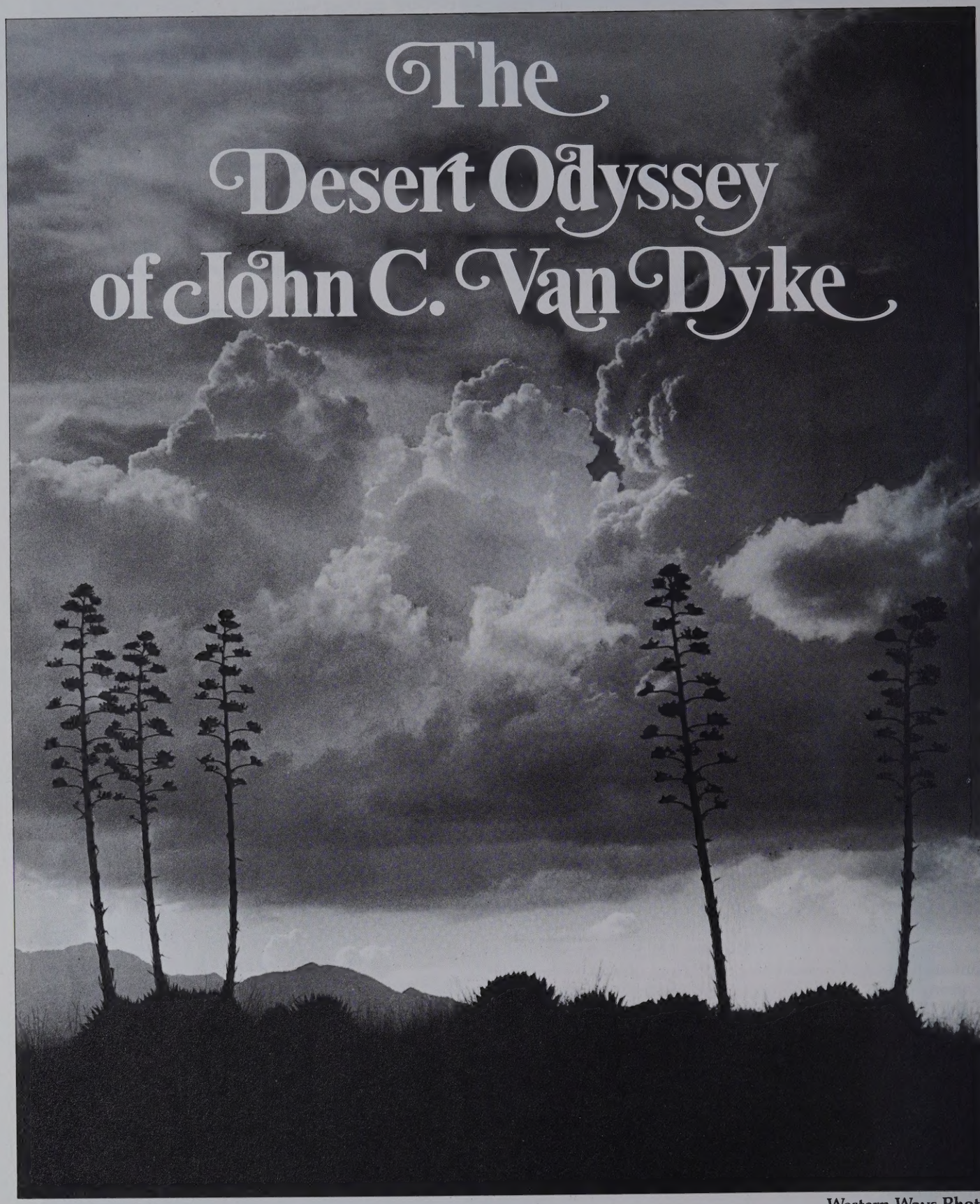
(Front cover) With magic and mystery and the subtle lure of fragile beauty, the desert intoxicates those who fall under her spell. **David Muench**



Western Ways Photo

by LAWRENCE CLARK POWELL

A choice celebration of the beauty and wonder and majesty of the arid lands of the Great Southwest....

David Muench >

Desert Odyssey

"The desert has gone a-begging for a word of praise these many years. It never had a sacred poet; it has in me only a lover."
—John C. Van Dyke
The Desert, 1901

During several centuries, the great sweep of Southwestern deserts was a perilous obstacle to man's efforts to reach the golden lands that bordered the Pacific. Not until late in the 18th century did Spain succeed in sending colonists overland to the coast from what is now southern Arizona. That first expedition went on upcoast from southern California to Monterey and the founding of San Francisco. Its success came from good planning, able leadership, and travel in the cool of winter.

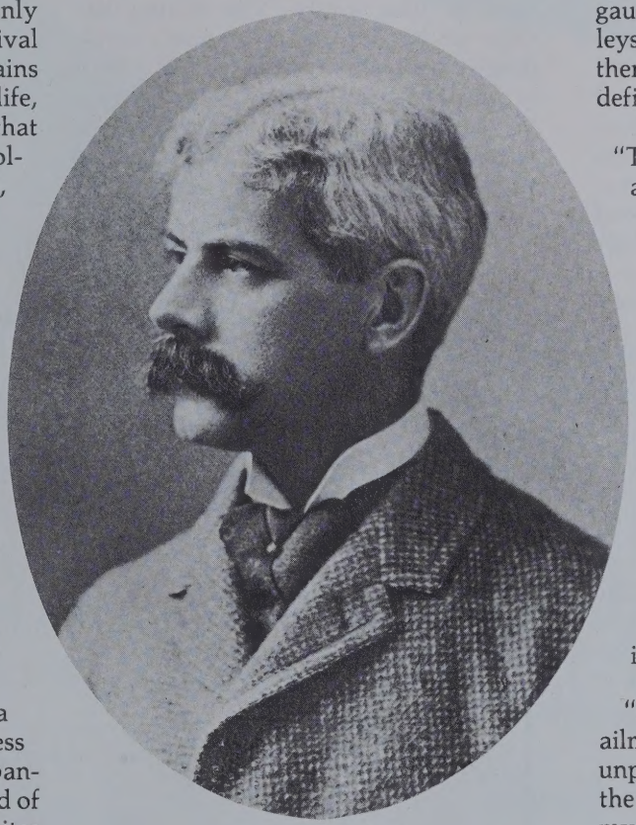
This was the heroic Anza expedition of 1775-76, composed of 240 men, women, and children, their supplies and livestock. In the annals of the American West only the Lewis and Clark expedition can rival it. Desert, river, dunes, and mountains were vanquished without the loss of life, yet so unattractive was the route that none tarried there nor returned to colonize the wastes. Today in California, descendants of those first immigrants still bear the proud names of their mother country.

Those Americans who rushed overland by the thousands, following the discovery of gold in California, were pitifully unprepared to cross the desert. Many perished from winter's cold or summer's heat or from Indian attack. Whatever route was taken, it was a place to cross as quickly as possible. The deadliest passages lay along the California-Nevada border, centered on what was aptly named Death Valley, and on the Arizona-Sonora border from Sonoita, southwest of Tucson, to Yuma on the Colorado, a 200-mile stretch of virtually waterless sandy waste christened by the first Spaniards El Camino del Diablo, (The Road of the Devil). Even to this day, grave sites may be seen along this deadly way which Anza wisely avoided in leading his colonists along the Gila River trail to the north.

Thus the desert won the bad name it long held. Only a few hardy prospectors ventured to roam its expanse. The sole inhabitants were the native Indians, from the Paiutes in the north and the Mojaves and Yumas of the Colorado River to the Pimas and Papagos of southern Arizona and Sonora. Only in modern times was the desert made comfortably habitable.

Desert literature consisted of explorers' and trappers' diaries, the reports of government expeditions, and railroad surveys. A hundred years lay between the Anza expedition and the first railways. Not until the turn of the century was the desert seen as a place of beauty—a stern and dangerous place, it is true, and armed with thorn, fang, and thirst, yet still a vast expanse of beauty, wonder, and healing.

Such a first celebrant was John C. Van Dyke, art critic and author, whose book, *The Desert*, was published in September 1901. It was a small edition that went through many reprints to win a readership far beyond the expectations of author or publisher. For more than 30 years this modest volume of 233 pages, containing only a single photographic illustration and no map or index, maintained its place as the cornerstone on which subsequent desert literature has been based. So many editions of *The Desert* were published that it has always been readily found in second-hand bookstores and libraries. A new edition appeared in 1976, followed in 1980 by a paperback edition.



(Above) Author of The Desert, *John C. Van Dyke, in 1898, at the age of 42. Courtesy L. C. Powell*
(Opposite page) Prickly pear and cholla share a tiny fraction of stony ground in the vast, dry Mojave Desert.
David Muench

Of the things that keep a book alive past the time of its first publication, the vitality of its prose is probably the most important. The desert's impact of form and color stirred Van Dyke to his depths and lent his writing the strength and passion that the reader feels to this day:

"...what tongue shall tell the majesty of it, the eternal strength of it, the poetry of its wide-spread chaos, the sublimity of its lonely desolation! And who shall paint the splendor of its light; and from the rising up of the sun to the going down of the moon over the iron mountains, the glory of its wondrous coloring! It is a gaunt land of splintered peaks, torn valleys, and hot skies. And at every step there is the suggestion of the fierce, the defiant, the defensive....

"The desert air is practically colored air. Several times from high mountains I have seen it lying below me like an enormous tinted cloud or veil. A similar veiling of pink, lilac, or pale yellow is to be seen in the gorges of the Grand Canyon; it stretches across the Providence Mountains at noonday and is to be seen about the peaks and packed in the valleys at sunset; it is dense down in the Coahuila Basin; it is denser from range to range across the hollow of Death Valley; and it tinges the whole face of the Painted Desert in Arizona. In its milder manifestations it is always present, and during the summer months its appearance is often startling....

"I was already ill [with a respiratory ailment in 1898]," Van Dyke wrote in his unpublished biography, "and went into the open of the desert to get well. Many of my days in there were ill days. But I kept busy making notes and studying vegetation and animals. Why did I go alone? Because I could find no one to go with me. They were all afraid of—nothing."

Twenty years later, he remembered that first summer on the desert as one of strange wanderings "...the memory of them comes back to me now mingled with half-obliterated impressions of white light, lilac air, heliotrope mountains, blue sky. I cannot well remember the exact route of the odyssey, for I kept no record of my movements. I was not travelling by map. I was wandering for health and desert information. I was just drifting with the wind, but even drifting in southwest Arizona I found

rather difficult. The hills held mighty little water, and the desert valleys stretched out into enormous wastes. More than once I was tempted to turn north and make a bee-line for the Southern Pacific Railroad. But we worried on a little further, with short rations of food and water, picking up rabbits and quail and slashing into cactus for wet pulp. Even the dog finally tackled the bitter pulp and the horse ate the joints of cholla after I had beaten off the spines. But the region was too dry, and in less than a week, I made a push north for the railway. We got there pretty well exhausted, and after following along it for I know not how many miles, we found a siding with some tank cars upon it. We topped the tanks and camped in the shade of the cars for twenty-four hours. Then we moved on along the line to Casa Grande and Tucson."

The book was roughed out, Van Dyke recalled, during that first summer of 1898 "...when I lay with my back against a rock or propped up in the sand." It was finished after he had made other trips deep into Sonora and as far south as Oaxaca, with backtracking to northern Arizona and the Mojave Desert where his older brother Theodore had begun ranching near Barstow and where the younger man first met John Muir. He even wandered up the redwood coast into Oregon with only his dog for company. He confessed to a profound need to get away from the herd. His odyssey covered parts of the four years 1898-1901.

In spite of the odds against him, Van Dyke survived to experience and complete his book, and it lives and is read to this day. It was done because he obeyed the basic laws of desert survival: abstinence and endurance. We can see now from our long look back why so few have come near his achievement, its authority, grace, and lasting readership.

To go back, on that first visit to Tucson while resting up, Van Dyke consulted authorities at the new Arizona Territorial University for verification of his own observations. They were Robert H. Forbes, professor of agricultural chemistry, and William P. Blake, head of the School of Mines and Territorial Geologist. Thanks to them appear in a footnote to *The Desert*. Upon receiving a copy, Professor Forbes sent several corrections to Van Dyke. They appear in all subsequent printings.

By February, 1901, Van Dyke had finished the book, having added materials from his observations in northern Arizona and in the high Mojave Desert of California. At a Sonoran *ranchería* 30 miles north of Hermosillo called La Noria Verde (green well-pump), where he was wont to board his horse, he dated his Preface-Dedication, then went on over the Sierra Madre into Chihuahua. Beyond the Rio Grande at Del Rio in Texas, he mailed the manuscript to his publisher in New York, with these prophetic words:

"It's a whole lot better than the swash which today is being turned out as 'literature.' And it will sell too, but not up in the hundreds of thousands. It is not so bad as that. My audience is only a few thousand, thank God!" Today, 81 years later, that audience is still growing.

Thus far I have accounted for how *The Desert* resulted from its author's long preparation in living and skill in writing. What of the book itself, its form, content, and style? Van Dyke judged his accomplishment in these words: "The writing was done under difficulties of heat, wind, dust—done with my back against a rock in a double sense. I was still far from well, and suffered greatly from depression. To write cheerfully under the circumstances was not easy. Readers and reviewers told me it was my best work, was a prose poem, and praised it for its style. If they had in mind the definition that style is the order and movement of one's sentences, then I suppose I paid some attention to its style, but I take it they meant 'fine writing' and an occasional purple patch. What really was of value in the book was the material which I had gathered at first hand. I knew my subject. When one has that, it is not necessary to bother about style. The book tells itself, and because of its peculiar knowledge, it dictates its own style."

(Right) Wind-spawned desert dunes near Yuma. Common in most of the great deserts of the world, they absorb rainfall which helps raise the level of the water table, producing oases in some areas. **Josef Muench**

(Below) Shaded areas indicate that much of Arizona is desert land, one distinctly different from the other. (Following panel, pages 8-9) With all its fury unleashed, a summer thunderstorm explodes over the desert. **Josef Muench**

Desert Odyssey

Let's sample the book's 12 short chapters. From the opening, "The Approach," Van Dyke's vision of the land appears to be determined by the configuration and lay of the land, by its essential form. "What was the attraction, wherein the fascination?" he asks and answers his own question: "There is a simplicity about large masses—simplicity in breadth, space and distance—that is inviting and ennobling. And there is something very restful about the horizontal line. Things that lie flat are at peace and the mind grows peaceful with them. Furthermore, the waste places of the earth, the barren deserts, the tracts forsaken of men and given over to loneliness, have a peculiar attraction of their own. The weird solitude, the great silence, the grim desolation,are the very things with which every desert wanderer eventually falls in love."

Although the Indians and the first Jesuit missionaries of the 17th and 18th centuries are referred to, people play no part in Van Dyke's scenario. Today's desert urbanization would send him running for the Sahara. Although ill, he was not a social refugee nor a misanthrope. John Van Dyke and Joseph Wood Krutch share a belief that the desert does not need people to enhance its appeal. Both believed that wildness and society are incompatible, as evidenced today in such once-remote places as Yosemite, Yellowstone, and the Grand Canyon.

In his second chapter, "The Make of the Desert," Van Dyke observes that the sands of the desert come from the wearing down of the mountain ranges, chiefly by the wind and blowing sand. "Grain by grain," he continues, "the vast foundations, the beetling escarpments, the high domes in air are crumbled away and drifted into valleys. Nature heaved up these mountains at one time to fulfil a purpose: she is now taking them down to fulfil another purpose. If she has not water to work with here as elsewhere she is not baffled of her purpose. Wind and sand answer quite as well."

What at first seems to him to be a silent land at repose appears at closer study to be a place of fierce struggle. "The feeling of fierceness grows upon you as you come to know the desert better. The sun-shafts are falling in a burning shower upon rock and dune, the winds blowing with the breath of far-off fires are withering the bushes and the grasses, the sands drifting higher and higher are burying the trees and reaching up as though they would overwhelm the mountains, the cloudbursts are rushing down the mountain's side and through the torn arroyos as though they would wash the earth into the sea. The life, too, on the desert is peculiarly savage. It is a show of teeth in bush and beast and reptile. At every turn one feels the presence of the barb and thorn, the jaw and paw, the beak and talon, the sting and the poison thereof. There is no living in concord or brotherhood here. Everything is at war with its neighbor, and the conflict is unceasing."

Van Dyke's sense of color is equally strong with his feeling for form. Here his art background is the most apparent. "Plain upon plain leads up and out to the horizon—far as the eye can see—in undulations of gray and gold; ridge upon ridge melts into the blue of the distant sky in lines of lilac and purple; fold upon fold over the mesas the hot air drops its veilings of opal and topaz. Yes; it is the kingdom of sun-fire. For every color in the scale is attuned to the key of flame, every air-wave comes with the breath of flame, every sunbeam falls as a shaft of flame. There is no questioning who is sovereign in these dominions."

Today's travelers to the Colorado Desert from Southern California follow the route taken by Van Dyke. Through the windswept pass of San Gorgonio they are funneled into the Coachella Valley dominated by the new urban communities of Palm Springs, Indio and their satellites, and by the Salton Sea.

Although when Van Dyke first came, the great 1906 breakthrough of the Colorado River that reformed the immemorial Salton Sea was not anticipated, he observed in "The Bottom of the Bowl" where earlier breakthroughs had left their watermarks on the mountains' feet.

In 1898 what proved a disastrous diversion project was already in the first stages. Van Dyke took a dim view of all reclamation projects, believing (mistakenly, as it proved) that desert irrigation would change the climate of Southern California. The change came years later with people and industry.

Patterns of desert life: The ocotillo (Fouquieria splendens) *is a thorny, scarlet-flowered member of the sandalwood family. The scorpion, an arachnid of the order* Scorpionida, *has a painful sting not usually fatal to man. The Gila monster* (Heloderma suspectum) *is slow and clumsy and, though venomous, rather shy and retiring.*

James Tallon

C. Allan Morgan

AHM11

< David Muench

Desert Odyssey

C. Allan Morgan

C. Allan Morgan

Van Dyke spoke out eloquently against the destruction of our natural resources by unbridled development. His was the long view of history. "Nothing human is of long duration," he wrote. "Men and their deeds are obliterated, the race itself fades; but Nature goes calmly on with her projects. She works not for man's enjoyment but for her own satisfaction and her own glory. She made the fat lands of the earth with all their fruits and flowers and foliage; and with no less care she made the desert with its sands and cacti. She intended that each should remain as she made it. When the locust swarm has passed, the flowers and grasses will return to the valley; when man is gone, the sand and the heat will come back to the desert. The desolation of the kingdom will live again, and down in the Bottom of the Bowl the opalescent mirage will waver skyward on wings of light, serene in its solitude, though no human eye sees nor human tongue speaks its loveliness."

From such somber thoughts he turned in his next chapter to "The Silent River." From the clear water of the upper basin, through the Grand Canyon to the silt-laden water of the lower reaches and the delta, the Colorado awed Van Dyke by its sullen power.

He met its challenge when he came to cross the river near the Mexican border below Yuma. "There I met a few Yuma Indians living along the river. We 'howed' and I talked a good deal of sign language about water east of the river. After some miles of river surveying, I found a place where we could cross with a little swimming. I made a raft of reeds and driftwood, and took all of my supplies over on that, and then swam back for the horse. The river was very low, but I would not risk my supplies on the horse's back. The route then lay down toward the mouth of the river, and then east along the Arizona boundary lines."

When he came to write on "Light, Air, and Color," Van Dyke was completely in his element. No one has matched Van Dyke's sensitivity and vocabulary in writing of what makes the desert so instantly recognizable.

"Desert air is not quite like the plateau air of Wyoming," he began his argument, "though one can see through it for many leagues. It is not thickened by moisture particles, for its humidity is almost nothing; but the dust particles, carried upward by radiation and the winds, answer a similar purpose. They parry the sunshaft, break and color the light, increase the density of the envelope. Dust is always present in the desert air in some degree, and when it is at its maximum with the heat and winds of July, we see the air as a blue, yellow, or pink haze. This haze is not seen so well at noonday as at evening when the sun's rays are streaming through the canyons, or at dawn when it lies in the mountain shadows and reflects the blue sky. Nor does it muffle or obscure so much as the moisture-laden mists of Holland, but it thickens the air perceptibly and decreases in measure the intensity of the light."

Those who would describe day's end on the desert had best not read Van Dyke in passages such as this: "I have seen at sunset, looking north from Sonora some twenty miles, the whole tower-like shaft of Baboquívari change from blue to topaz and from topaz to glowing red in the course of a half hour. I do not mean edgings or rims or spots of these colors upon the peak, but the whole upper half of the mountain completely changed by them. The red color gave the peak the appearance of hot iron, and when it finally died out the dark dull hue that came after was like that of a clouded garnet."

(Left and below) Faunal dwellers in the desert find the region's spiney plants excellent homesites: A mourning dove (Zenaidura macroura) *has built its nest in a giant saguaro* (Cereus giganteus), *while a roadrunner* (Geococcyx californianus) *has selected a chain-fruit cholla to rest in. (Right) A rising sun illuminates a hedgehog cactus bloom* (Echinocereus).

Gary Ladd >

"Desert Sky and Clouds" follows naturally, and here again we encounter the prose of a master: "The more brilliant sunsets are only seen when there are broken translucent clouds in the west. There are cloudy days even on the desert. After many nights of heat, long skeins of white stratus will gather along the horizons, and out of them will slowly be woven forms of the cumulus and the nimbus. And it will rain in short squalls of great violence on the lomas, mesas, and bordering mountains. But usually the cloud that drenches a mountain top eight thousand feet up will pass over an intervening valley, pouring down the same flood of rain, and yet not a drop of it reaching the ground. The air is always dry and the raindrop that has to fall through eight thousand feet of it before reaching the earth, never arrives. It is evaporated and carried up to its parent cloud again. During the so-called 'rainy season' you may frequently see clouds all about the horizon and overhead that are 'raining' —letting down long tails and sheets of rain that are plainly visible; but they never touch the earth. The sheet lightens, breaks, and dissipates two thousand feet up. It rains, true enough, but there is no water, just as there are desert rivers, but they have no visible stream." Thus, Van Dyke observed, the desert is both terrestrial and aerial.

In "Illusions" Van Dyke writes of desert mirages, then leads on to chapters on vegetation, animal and bird life, all acutely witnessed and described. Adapt or perish is his recurrent theme. Even as Krutch, half a century later, was intrigued by desert creatures' ability to survive on minute amounts of moisture, so Van Dyke marveled at the way each species has adapted to survive in the fierce competition of desert life.

"Yet there is one quality more general than special since almost everything possesses it," he concludes, "and that is ferocity—fierceness. The strife is desperate; the supply of food and moisture is small, the animal is very hungry and thirsty. What wonder then that there is the determination of the starving in all desert life! Everything pursues or is pursued. Every muscle is strung to the highest tension. The bounding deer must get away; the swift-following wolf must not let him. The gray lizard dashes for a ledge of rock like a flash of light; but the bayonet bill of the road-runner must catch him before he gets there. Neither can afford to miss his mark. And that is perhaps the reason why there is so much development in special directions, so much fitness for a particular purpose, so much equipment for the doing or the avoiding of death. Because the wild cat cannot afford to miss his quarry, therefore is he made a something that seldom does miss."

This account of desert animals is concluded by a peroration on desert beauty: "Even the classic idea of beauty, which regards only the graceful in form or movement or the sensuous in color, finds types among these desert inhabitants. The dullest person in the arts could not but see fine form and proportion in the panther, graceful movement in the antelope, and charm of color in all the pretty rock squirrels. For myself, being somewhat prejudiced in favor of this drear waste and its savage progeny, I may confess to having watched the flowing movements of snakes, their coil and rattle and strike, many times and with great pleasure; to having stretched myself for hours upon granite bowlders (sic) while following the play of indigo lizards in the sand; to having traced with surprise the slightly changing skin of the horned toad produced by the reflection of different colors held near him. I may also confess that common as is the jack-rabbit he never bursts away in speed before me without being followed by my wonder at his graceful mystery of motion; that the crawl of a wild cat upon game is something that arrests and fascinates by its masterful skill; and that even that desert tramp, the coyote, is entitled to admiration for the graceful way he can slip through patches of cactus. The fault is not in the subject. It is not vulgar or ugly. The trouble is that we perhaps have not the proper angle of vision. If we understood all, we should admire all."

Whether conducting a gallery tour in the museums of Europe, as he was wont to do in summers before and after his desert years, or expanding on the beauty of nature as observed on his desert odyssey, Van Dyke looked upon beauty with objective impartiality:

"We may prefer the sunlight to the starlight, the evening primrose to the bisnaga, the antelope to the mountain lion, the mocking-bird to the lizard; but to say that one is good and the other bad, that one is beautiful and the other ugly, is to accuse Nature herself of preference—something which she never knew. She designs for the cactus of the desert as skillfully and as faithfully as for the lily of the garden."

(Left) Spring poppies in the Quinlan Mountains. **David Muench**
(Below) For countless ages the ripened fruit of the saguaro has been a staple item of food for the Papago Indians. **Margaret H. Eiseman**

Desert Odyssey

His final chapters, "Mesas and Foothills" and "Mountain-Barriers," frame the middle parts on the lower lands, together with his opening sections on the approach and the making of the desert. His perception of the desert's configuration is crystalline, derived always from firsthand observation and not from topographic maps. Here is how he perceives the land:

"The word mesa (table), by local usage in Mexico and in the western United States, is applied to any flat tract of ground that lies above an arroyo or valley, as well as to the flat top of a mountain. In a broad, if somewhat strained use of the word, it also means the great table-lands and elevated plains lying between a river-valley and the mountain confines on either side of it. The mesas are the steps or benches that lead upward from the river to the mountain, though the resemblance to benches is not always apparent because of the cuttings and washings of intermittent streams and the breakings and crossings of mountain-spurs."

And he continues, "As you rise up from the Colorado Desert, crossing the river to the east, you meet with a great plain or so-called mesa that extends far across Southern Arizona and Sonora almost up to the Continental Divide. It is broken by short ranges of barren mountains that have the general trend of the main Sierra Madre, and it looks so much like the country to the west of the river that it is usually recognized as a part of the desert, or at the least 'desert country.'"

His odyssey gave Van Dyke a new perspective on his profession as an art critic, and a better evaluation of the Old World romantic view of nature:

"Doctor Johnson, who occasionally went into the country to see his friends, but never to see the country, who thought a man demented who enjoyed living out of town; and who cared for a tree only as firewood or lumber, what would he have had to say about the desert and its confines? In his classic time, and in all the long time before him, the earth and the beauty thereof remained comparatively unnoticed and unknown. Scott, Byron, Hugo—not one of the old romanticists ever knew Nature except as in some strained way symbolic of human happiness or misery. Even when the naturalists of the last half of the 19th century took up the study, they were impressed at first only with the large and more apparent beauties of the world—the Alps, the Niagaras, the Grand Canyons, the panoramic views from mountain-tops. They never would have tolerated the desert for a moment."

Nevertheless, Van Dyke ended *The Desert* with a grand look from on high, an ending which again reveals the sense of form which he gave his book. As he began by coming to the desert from the higher elevation of the San Gorgonio Pass, so does he end by an ascent of the great granite mountain of San Jacinto, toiling up from the Bottom of the Bowl through the successive life zones of creosote (which he calls greasewood), juniper, and pine to snow flowers and a vast view over the coastal plain to the blue ocean. And a farewell look back from whence he came:

"Come to the eastern side of the peak and look out once more upon the desert while yet there is time. The afternoon sun is driving its rays through the passes like the sharp-cut shafts of search-lights, and the shadows of the mountains are lengthening in distorted silhouette upon the sands below. Yet still the San Bernardino range, leading off southeast to the Colorado River, is glittering with sunlight at every peak. You are above it and can see over its crests in any direction. The vast sweep of the Mojave lies to the north; the Colorado with its old sea-bed lies to the south. Far away to the east you can see the faint forms of the Arizona mountains melting and mingling with the sky; and in between lie the long pink rifts of the desert valleys and the lilac tracery of the desert ranges."

Recognition of how it was that John C. Van Dyke came to be the first and best writer to praise the desert began in 1951 with Franklin Walker's *A Literary History of Southern California* which led in turn to the present writer's research published in *Westways* in 1972 and in his book *Southwest Classics* two years later. What had long puzzled many readers as to how an eastern art critic could have written such a landmark book was no longer a mystery.

(Below) Vulpes macrotis, *or kit fox, is a dog-shaped carnivore with a bushy tail. It is 31 inches in length and may weigh up to three pounds when fully grown. (Bottom) The peccary* (Dicotyles tajacu), *also called javelina, is a pig-like artiodactyle (hooved mammal) that lives in bands of three to 20, and may grow to 37 inches in length and weigh 60 pounds fully grown. (Opposite page) A giant saguaro forest in the Rincon Mountains east of Tucson.*

C. Allan Morgan

James Tallon

Jeff Gnass >

Desert Odyssey

(Left) A chain-fruit cholla (Cylindropuntia fulgida) *in the Ajo Mountains.* **Jeff Gnass**
(Above) Home for this great horned owl (Bubo virginianus) *is the sentinel of the desert, the giant saguaro.* **C. Allan Morgan**
(Following panel, pages 20-21) A warm Burro Creek afternoon in Mohave County. **Jeff Gnass**

After Van Dyke came the deluge. In the span of the first decade of the new century, what had been a barren literary field was flooded by a sequence of desert books, no two alike and all written without dependence on each other. Two years after *The Desert*, Mary Austin's *The Land of Little Rain* appeared in 1903, it too destined to win a long and lasting success, recognized from the first as a classic of American literature.

Whereas Van Dyke's book treats of the three-part Southwestern desert—Mojave, Colorado, Sonora—Mary Austin's is confined to the northernmost reach of the arid lands, lying at the base of the Sierra Nevada along the California-Nevada border, its heartland the valley of the Owens River. This, not Arizona-New Mexico, as some have mistakenly thought, is her Land of Little Rain. It is a land of scant moisture of any kind, so effectively do the mountains milk the clouds, and even less as Los Angeles continues to pump the groundwater and take it by aqueduct to the thirsty city 250 miles away.

In the beginning, Mary Austin and other Inyo County residents waged a gallant fight against what they called a water rape. Upon conceding defeat, she moved to Santa Fe and wrote a companion masterpiece, *The Land of Journeys' Ending*—but not before she prophesied that doom would overtake the Angel City. Could it be smog?

Her desert book was soon followed by A.C. Burdick's *The Mystic Mid-Region* (1904), George Wharton James's *The Wonders of the Colorado Desert* (1906), Stewart Edward White's *Arizona Nights* (1907), Zane Grey's *The Heritage of the Desert* (1910), J. Smeaton Chase's *California Desert Trails* (1919); and in our time by the books of Ross Calvin, Edwin Corle, and Joseph Wood Krutch.

Throughout this flow of desert literature is the recognition of John Van Dyke's primacy. Yet other than the knowledge that he was an art critic and author of gallery guides and works on aesthetics, no one seemed to know how he came to write such an influential desert book, obviously from firsthand observation. The book itself held scant evidence, so rigorously had the author left himself out of it. That it was a labor of love rather than a scientific treatise was apparent from our prefatory words: "The desert has gone a-begging for a word of praise these many

years. It never had a sacred poet; it has in me only a lover." Here was a new voice from the wastes!

In the early 1950s, when talking with Edwin Corle about the introduction I was to write to a new edition of his *Fig Tree John*, an enduring novel of the Coachella Valley, he remarked, "We desert writers are forever in the debt of John Van Dyke. He saw it first and said it best. The mystery is how a tenderfoot dude could have come out here from the east and broken a trail the rest of us have been following every since." At that time, I had no answer for him.

Soon after that, I had a similar testimonial from Dr. Ross Calvin, an Episcopal minister and author of *Sky Determines*, a beautiful book about New Mexico's heavenly weather. "You must know," he wrote, "although few others do nowadays, the grand book which gave me my first introduction to the desert. It was the work of an eastern art critic—of all people—who lectured long ago at Harvard and Princeton. His name? John C. Van Dyke. The book? Simply *The Desert*, Scribner, 1901. What a color vocabulary he had! And he knew with surprising accuracy many of the plants and animals of the wastes. But above all, how sensitive he was to desert light and air!"

These pages could be filled with similar testimony to Van Dyke's achievement. Two more examples are especially pertinent. In a single day, I heard tributes by two dissimilar Arizonans who share a love for the desert. Dr. William G. McGinnies, director emeritus of the University of Arizona's Arid Lands Studies, underlined Van Dyke's botanical authority, while Joseph Stacey, then editor of *Arizona Highways*, declared that he looked upon Van Dyke as the most inspirational of desert writers.

All of this made me determined to find out *how come*? How did such unlikely qualifications enable a writer to produce a masterpiece of Southwestern desert literature which has never been surpassed in authority and beauty?

Well known is Doctor Johnson's assertion that a man will turn over an entire library in order to write a single book. This I was prepared to do if necessary; and it was a mighty big library in which I found myself! At that time the UCLA library had already exceeded 3 million volumes.

As an old library hand, I was prepared to cope with cobwebs, dust, and cranky readers. I went first to *Who Was Who in America*, figuring that by 1972 Professor Van Dyke was undoubtedly deceased. There I read that he had died in 1932 at the age of 76. He was born in New Jersey of a Dutch colonial family (dike-dwellers in the old country), was educated at Rutgers and Columbia (law degree); professor of art history and librarian of the New Brunswick Theological Seminary; author of 35 books on art, nature, and such diverse subjects as New York City, the evils of money, and the editorship (ghost writing?) of Andrew Carnegie's autobiography, plus travel books on the West Indies, Egypt, and Java.

There is only one basic test to administer a library: does it have the book you want when you want it? I found UCLA held virtually all of Van Dyke's prolific output, lacking only a privately-printed family history which I obtained from the Library of Congress in a Xerox copy.

After a week's reading spree, I sorted out my notes and brought them into focus. They reconfirmed what I had long known: no authoritative, lasting work is ever a casual, chance product. Written in the prime of Van Dyke's early 40s, *The Desert* was the result of long preparation and wide experience as a writer and observer—it was the 11th of his 35 volumes—and its desert fieldwork had been made possible by Van Dyke's youth having been spent in strenuous outdoor experiences in Minnesota, Wyoming, and Montana.

When Van Dyke was a boy of 12, his father had left a distinguished career as a lawyer and judge in New Jersey and taken his wife and five sons to Minnesota and embarked on large-scale farming on the Mississippi at the mouth of the Chippewa River. As the next youngest boy, John Charles had the freedom to roam the

(Left) In its own small way, the praying mantis (family Mantidae, *order* Orthoptera*) helps maintain Nature's critical balance in the arid lands.*
James Tallon
(Above and right) The Joshua tree isn't a tree at all but a tall branched arborescent yucca (Yucca brevifolia).
Josef Muench/Ed Cooper

"There is a simplicity about large masses—simplicity in breadth, space and distance—that is inviting and ennobling. And there is something very restful about the horizontal line. Things that lie flat are at peace and the mind grows peaceful with them. Furthermore, the waste places of the earth, the barren deserts, the tracts forsaken of men and given over to loneliness, have a peculiar attraction of their own. The weird solitude, the great silence, the grim desolation, are the very things with which every desert wanderer eventually falls in love."

The Painted Desert. Exposed layers of red and yellow sediment and bentonite clay give this arid land in northeastern Arizona its name. **Kathleen Norris Cook**

Desert Odyssey

prairie, river, and mountain, making real what a childhood atlas had labeled "Unexplored." From the Sioux he learned things of nature—hunting, fishing, canoeing—that proved invaluable years later when he set out on his desert odyssey.

Thus did John Van Dyke prove to be far from the dude described by Edwin Corle. Although subsequently schooled in aesthetics and the law, he was no unseasoned newcomer to the frontier. His outdoor preparation was similar to that experienced by Theodore Roosevelt on his way to the presidency via the Dakota Badlands.

When Van Dyke fell ill with a respiratory ailment, his oldest brother, Theodore, who had settled in Southern California and become a writer and water engineer, persuaded John to join him in Los Angeles. "The city was not much of a city in 1898," we read in the unpublished autobiography preserved at Rutgers, "and it did not impress me in any way. In a few days I went out toward the Cahuenga Pass so as to be nearer the wild of the Santa Monica mountains. From my brother I got some buckskin of his own shooting and tanning and made some moccasins after a Sioux pattern which I had not forgotten. It proved too close to civilization for me, not wild enough, and as spring came on, I went up to Hemet, at the foot of the San Jacinto mountains."

Even that proved too tame for Van Dyke, and after picking up a fox terrier and an Indian pony, he succumbed to the lure of the desert. Let him tell it in his own words:

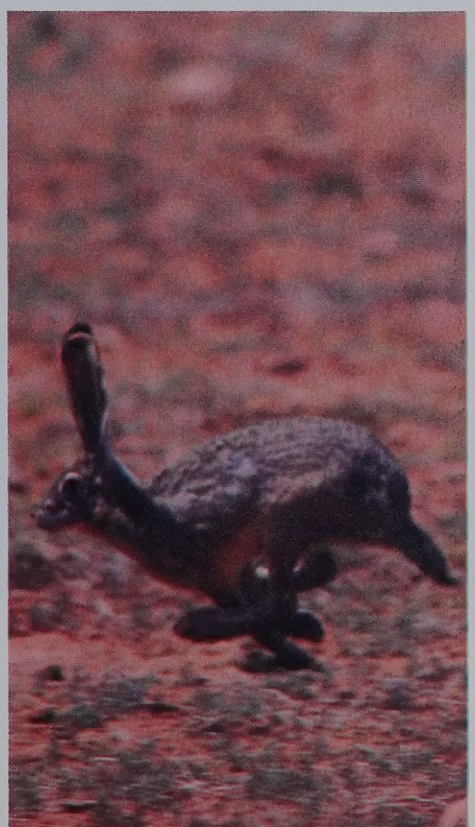
"Not far away was the San Gorgonio Pass, leading out to the Colorado Desert—the desert that everyone talked about but very few had ever seen. Tales came in from every quarter about its heat, its drifty sand, its dust storms; about its few wells and they poisoned by copper, its lost mines and miners, its human skeletons and bleached bones of horses found in the sand; about perils of prospectors and emigrants who had perished in the waste coming over from Yuma. It was a place to be avoided. Everyone that went in there eventually got caught up with. At least that was the warning that came to me when I talked of exploring the region. I would never come out, either alive or dead.

"But I was just ill enough not to care about perils and morbid enough to prefer dying in the sand, alone, to passing out in a hotel with a room-maid weeping at the foot of the bed. I laughed at all of the tales and set to work preparing a light outfit for desert travel. This consisted of a 30-30 rifle for large game, and a small Chicopee .22 calibre pistol for small game; a camping kit of light blankets, hatchet, small shovel, a few pans and tin cups, a gallon of water in a canvas bottle, and several sacks of condensed food. I made my condensation by grinding bunches of parched corn, beans, coffee, chocolate, and dried venison. I packed this closely in shot sacks. This was my mainstay in case of disaster. It would last me for weeks without another item of any sort. Except water. But, in addition, I took along with me some tablets of chocolate, some flour and bacon, salt, tea, and a small bottle of saccharine. My whole outfit, to last me for weeks, weighed less than fifty pounds."

In addition to my discovery of his autobiography, a book of Van Dyke's nature essays, *The Open Spaces*, published 20 years after *The Desert*, also proved a rich source of information about the background of his masterpiece. Both were obviously unknown to those who had puzzled over Van Dyke's achievement.

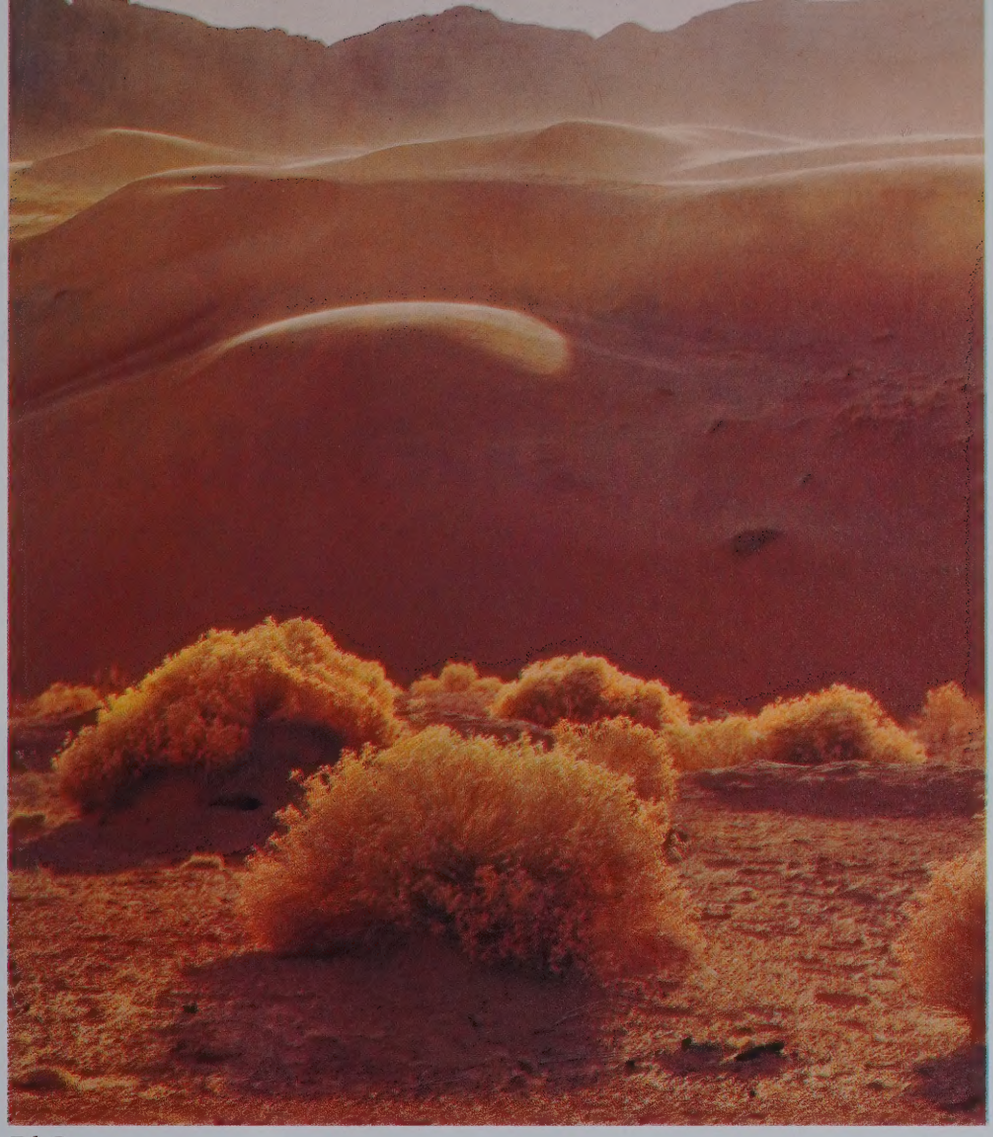
I found myself reflecting upon the sad fate of a writer whose books are soon forgotten, even in his lifetime. Today, save for *The Desert*, the many works of Van Dyke's lifetime of study, travel, lecturing, and writing are unread save by zealots such as I. Even a subsequent book on the Grand Canyon has been all but washed away in the flood of Canyon literature with its emphasis on the photographic.

I turned to a microfilm of the *New York Times* for December 6, 1932, the day after John Van Dyke's death in St. Luke's Hospital after an emergency operation. The obituary of the lifelong bachelor was



(Left and above) Petrified Forest National Park is itself a part of the Painted Desert (see pgs. 24 and 25). *The 94,189-acre park was established as a national monument in 1906 and as a national park in 1962.* **Peter Kresan** *(Right) The black-tailed jackrabbit of the high desert.* **James Tallon**

Jerry Sieve



Ed Cooper

Desert Odyssey

long and generous, and marked by testimonials from Walter Damrosch, Governor Wilbur Cross of Connecticut, Professors Brander Mathews of Columbia and William Lyon Phelps of Yale, and the painter Childe Hassam, although most of the space was given to the international sensation caused by Van Dyke's recent book on Rembrandt in which he declared that of a thousand examples of the artist's work held by museums, no more than 50 were genuine. Of Van Dyke's masterpiece there was no mention. Forty-four years were to pass before *The Desert* came back into print. □

Author's note: The Desert was first published by Charles Scribner's Sons in New York in 1901. Subsequent editions contain the author's corrections.

Beginning with the edition of 1915, *The Desert* was illustrated from desert photographs by J. Smeaton Chase. The last edition in Van Dyke's lifetime appeared in 1930 with additional "Desert Notes" by his nephew Dix Van Dyke, son of Theodore.

In 1976 the Arizona Historical Society, 949 East Second Street, Tucson, AZ 85719, published a facsimile of the corrected edition of 1903, with an Introduction by Lawrence Clark Powell and map by Don Bufkin. This hardbound edition is in print at $10.00.

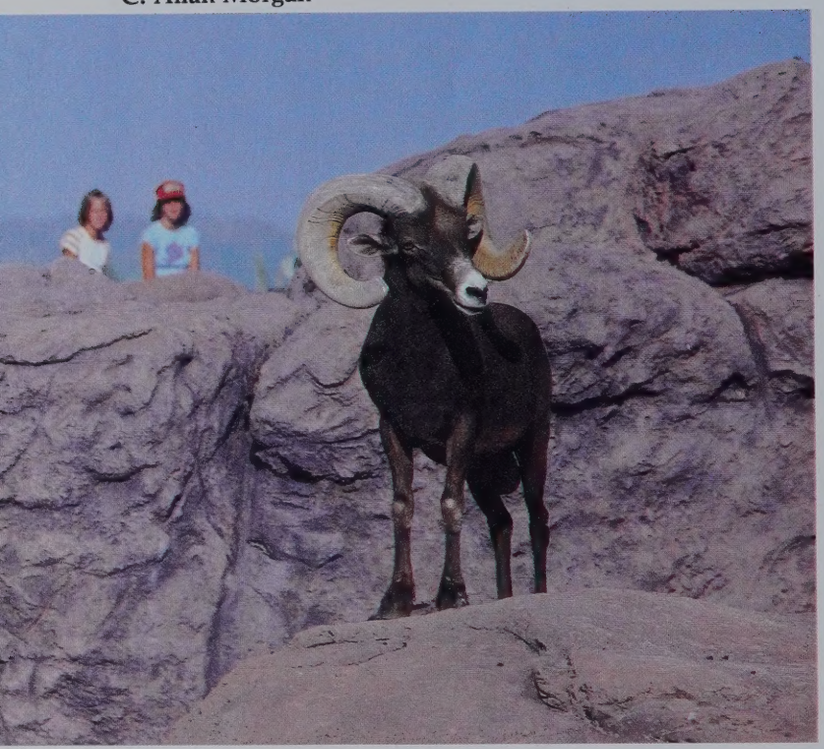
In 1980 Peregrine Smith, Inc. of Salt Lake City, Utah, fascimiled the uncorrected first edition of 1901, with an Introduction by Richard Shelton. This paperback is in print at $3.45 and is one of that publisher's series on the Literature of the American Wilderness.

Heaved up, faulted, torn, and inundated by one of the greatest floods of the prehistoric Mesozoic era, Monument Valley today is a magic land of timelessness, color, and legend.

(Below) Visitors to the Arizona-Sonora Desert Museum see more wildlife and curious arid land plants in a few hours than a normal person with lots of luck could hope to see in years of searching. In addition to natural history, stressing the vital relationships between water, plants, animals, and people, the Desert Museum also is involved in scientific research, promoting conservation worldwide.

Four score years after Van Dyke's narrative account of the marvels of the desert, a unique arid land ecology center continues interpreting the values and unraveling the mysteries of the Southwest's great open spaces....

C. Allan Morgan



Harry Redl

David Burckhalter

The Arizona-Sonora Desert Museum

by Don Dedera

avid Burckhalter

David Burckhalter

Gill Kenney

EXIT

Desert Museum

One lies prone for hours at a time admiring up close a complete ecosystem no larger than a child's sandbox.

Another lives in a cave, all alone, scarcely speaking to anyone but himself, in curses.

Still another, a Papago woman, visits a secret spot—where prospers the red yucca so prized for plaiting into fine basketry.

This one is a scientist, who harvests beans from gigantic legumes and mills them into flour, which he shapes into cakes of natural bread.

Stand back! Here comes a 10-year-old boy on an off-road bike, leaving a track which may last a thousand years.

There is a woman, a mother and homemaker who, encircled by a band of pupils, allows a tarantula to march harmlessly across her bare palm.

One man hikes every foot of the way across the country between Los Angeles and Phoenix, seeking traces of the trails of ancient hunters.

Still there is a Mexican woman who adorns the entrance to her adobe hut with *ristras* of colorful dried peppers.

Then what of the 85-year-old world-famed explorer of the South Pole, now retired to a realm of snowless dunes?

And underground: a miner discovers crystals as gorgeous as royal gems, a professor hunts elephants 10 millenia old, and a farmer extracts water untouched for a million years.

Varied as are these extraordinary individuals in locale and outlook and vocation, they share a commonality: They are all people of the desert, the direct descendants and collateral kinfolk of the intrepid souls and visionary mystics who within the past century seized possession and acquired respect for the arid lands of the Great Southwest.

The mistakes of those years are myriad and painfully apparent. Yet, fresh hope arises today from increasing knowledge of the harsh realities and sweet subtleties of the land of much sun and little water. More and more, the question is asked: Can people and the desert survive one another; is there a chance for a better tomorrow for the land as well as its human occupants?

Only in relatively recent times has the question even been asked.

At first, as the presidios and parishes of Spain and the forts and towns of the United States began to dot the desert, nearly all human reaction was negative. "Horrid," an explorer opined. Kit Carson: "A wolf could not make a living on it." U.S. Senator: "Just like hell. All it lacks is water and good society." Journalist: "A barren, deserted, dreary waste, useful only as a dwelling place for the coyote, the owl, the rattlesnake, and the prairie dog." Dr. John S. Griffin, who traveled with General Steven Kearny down the Gila in 1846, "utterly worthless... the cactus is the only thing that grows.... Every bush in this country is full of thorns... every rock you turn over has a tarantula or centipede... and the most beautiful specimens of rattlesnakes, lizards and scorpions." An enlisted man echoed in a letter home, "We fought one war with Mexico to get Arizona. We ought to fight another one to make her take it back."

In fact, some westering Americans did encounter a hostile, super-hot Sahara. About 300 foolish, ill-prepared, and luckless emigrants perished of thirst and sunstroke crossing the Devil's Highway *(AHM, Nov. 79)* along the Mexican border during and after the Gold Rush. Their horrible fate reinforced the fears of those who followed—ranchers, prospectors, farmers, and townspeople determined to wrest a living from the enemy. Invade it. Conquer it. Convert it.

Some tales, blatantly tall, further injured the desert's reputation. Easterners believed cavalryman/author J. Ross Browne: "I have even heard complaint made that the temperature failed to show the true heat because the mercury dried up. Everything dries; wagons dry; men dry; chickens dry; there is no juice left in anything, living or dead, by the close of summer. Officers and soldiers are supposed to walk without creaking; mules, it is said, can only bray at midnight; and I have heard it hinted that carcasses of cattle rattle inside their hides. Chickens hatched at this season, as old Fort Yumans say, come out of the shell ready cooked."

A memo from a tourist told the world: "The rabbits have somehow gotten the body of the hare and the ears of the ass; the frogs, the body of the toad, the horns of the stag-beetle and the tail of the lizard. The trees fall uphill, and the lightning comes out of the ground."

Ramblings of a desert rat: "Hot? Why, it once got so hot, when a single drop of rain fell and struck my pardner on the head, he was knocked for a loop, and it took three buckets of sand to bring him around. One awful summer, the sun burned a hole in the sky. The greasewood dried up to straw, and the rocks turned black. The prickly pear cactus shrank so thin there was only one side to 'em."

A modern desert lover puts it into perspective. From Chris Helms, "What, then, *had* we expected of deserts? Endless, undulating sand dunes occasionally rippled by dry, scorching winds? Gila monsters so vicious that they attack on sight? Blood-red sun beating down with blistering intensity on terrain so hostile that it is utterly devoid of delicacy and beauty? Parched throats crying out for *water*, that precious commodity which of course is nowhere to be found?"

Not until 1901 did a literate and effective champion emerge. Eastern art critic John C. Van Dyke published his book titled simply *The Desert* (see article this issue beginning on page 2). The book was inspired by "a summer of strange wanderings" through the several deserts called Mojave, Colorado, and Sonoran, and deep into arid Mexico. The first "to perceive and praise the arid lands as both beautiful and precious," Van Dyke movingly pleaded for understanding of surrealistic vistas of "white light, lilac air, and heliotrope mountains and blue sky." Thereafter other thinkers elaborated upon Van Dyke's theme. The nation's attitude toward the desert softened. By the 1950s and 1960s, the late Dr. Joseph Wood Krutch would win wide acclaim for his classics, *The Desert Year* and *The Voice of the Desert*, none less than the unabashed love

(Opposite page) The Desert Museum, top, in the heart of desert country. Below, chuckwallas at the museum perform to the delight of onlookers.
Jeff Gnass/David Burckhalter
(Below) Volunteers give live animal demonstrations right on the museum paths and also lead tours of the grounds, giving visitors close-up views of plant adaptation and wildlife behavior.
David Burckhalter

letters of an elderly Connecticut Yankee transplanted by choice to a foreign land, dry and warm.

He began to observe (in print) that the most serious charge that can be brought against his old home, New England, "is not Puritanism, but February." Or as an even older saying goes, attitude is everything. Perception more shapes human behavior than experience. And nowhere moreso, than on the desert.

In my own strange wanderings of 40 years and more, desert dwellers have contributed to a mosaic of lure and lore:

—W. G. (Gig) Kneeland, desert-wise newsman: "Well, homes have coolers and refrigerators now, but I remember when there was little or no ice. Water was cooled in *ollas* made of porous clay and hung in the shade. Perishables were kept in a desert cooler—a box of shelves covered with wet burlap."

—Louis R. Jurwitz, bringer of modern meteorology to Arizona: "Sure it can get hot and dry. How about 127 degrees in the shade at Parker, on July 7, 1905? Or less than half an inch of rain at Wellton *for the entire year* of 1928?

—Frances Nutt, biographer of desert humorist Dick Wick Hall: "He said he kept a frog that carried a canteen to keep the moss on his back green. And once he wrote that it was too hot to quarrel, so the Ladies Aid Society didn't meet that week."

—Dr. Herbert L. Stahnke, pioneer in the study of venomous desert animals: "Considering the great numbers of people and great numbers of poisonous creatures, the fact that so few people are stung or bitten is a testimony to the nonaggressive behavior of desert animals."

—Dana Burden, dude rancher: "I have been in famous temples and cathedrals, but to me nothing is as spiritually inspiring as a desert overlook at sundown."

—Ida Redbird, Native American potter in her home of wattled mud: "They are slipped with iron oxide and burnished with pebbles and fired on the ground. But it all starts with the clay I dig myself. I dig it and taste it. If it is sweet and earthy, it is good. If it is salty, it will not make good pots."

—Douglas Rigby, author of *Desert Happy*: "Although minus the bombast of desultory human wars, war on the desert is continuous; and among plants here, where drought's the norm and often abnormally protracted, the ceaseless battling for survival often seems ferocious, and it provokes such fantastic accomplishments in endurance that studious men must marvel."

—Bottle Bob (who would answer to no other name, and who built a desert house entirely of empty wine bottles): "I live alone, me and my burros, Loco and Lobo. I deserve a pretty house."

—Goldie Richmond, miner and trapper at a trading post outside Ajo: "It was a lynx cat. It measured 42 inches from its nose to its stubby tail....My husband pushed through a big desert hackberry, and the big cat jumped. I grabbed and choked with all my might, held on because I didn't dare let go. Finally it went limp. Do you want to see my eight-inch scar?"

—William Coxon, respected amateur archeologist: "I am convinced, through the study of inscriptions pecked into desert rock, that the North American continent was fully explored by Israelites 10,000 years ago."

—Robert Peebles, coauthor of *Arizona Flora*: "I look into the bloom of a hedgehog cactus and see the eye of creation."

—Charles S. Mott, of Flint, Michigan, at the time worth some $500 million: "Every year I come down here and adopt the nickname of Desert Dick and wear old clothes and visit my desert friends. They never ask me of anything, except myself. That's how desert people are."

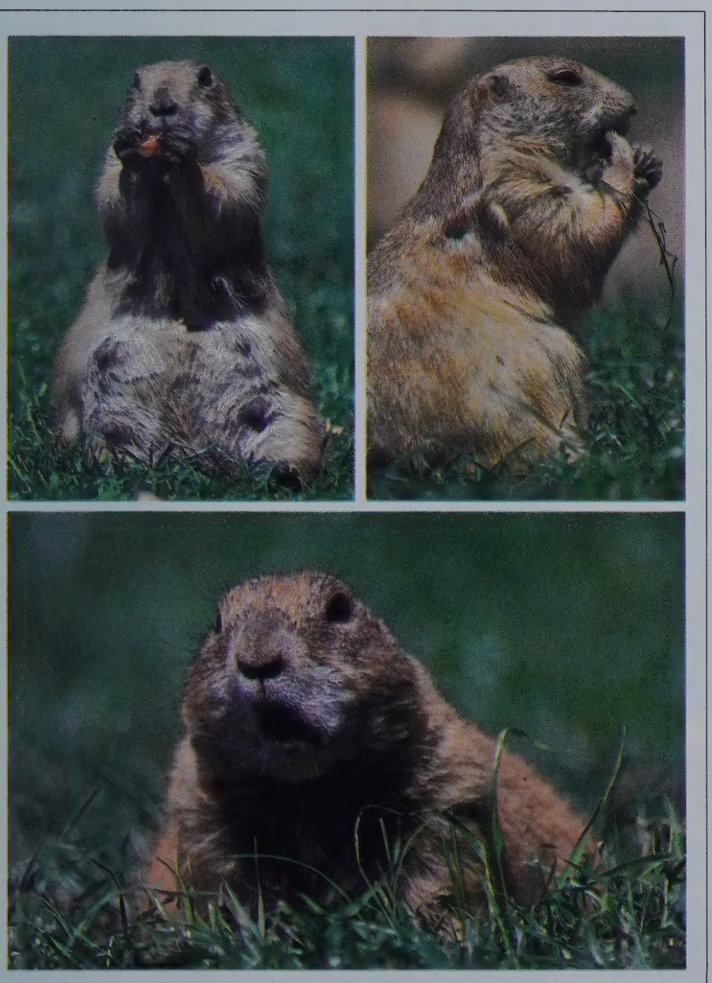
—Peggy Kater, who in 1949 settled at the junction (named Why) of Arizona highways 85 and 86—no water, no store, no electricity, no telephone: "Why do we stay in Why? We love the beautiful sunsets, the clear smog-free air, the giant saguaros, that first cool breeze from the Gulf on a hot summer's night, and most of all, our good neighbors and friends.... Why Why? Why not?"

Goya R. G. Kenny

Over 200 species of live animals are exhibited at the Desert Museum, most in natural settings. One of the cleverest of the creatures to be seen is the prairie dog, left and inset box at right. In addition to a walk-in aviary, where four different habitats provide natural settings for 80 species of wild birds, two outdoor "Bird Circles" house such strange and fascinating desert dwellers as the red-tailed hawk and barn owl, right, above, and the turkey vulture, far right.

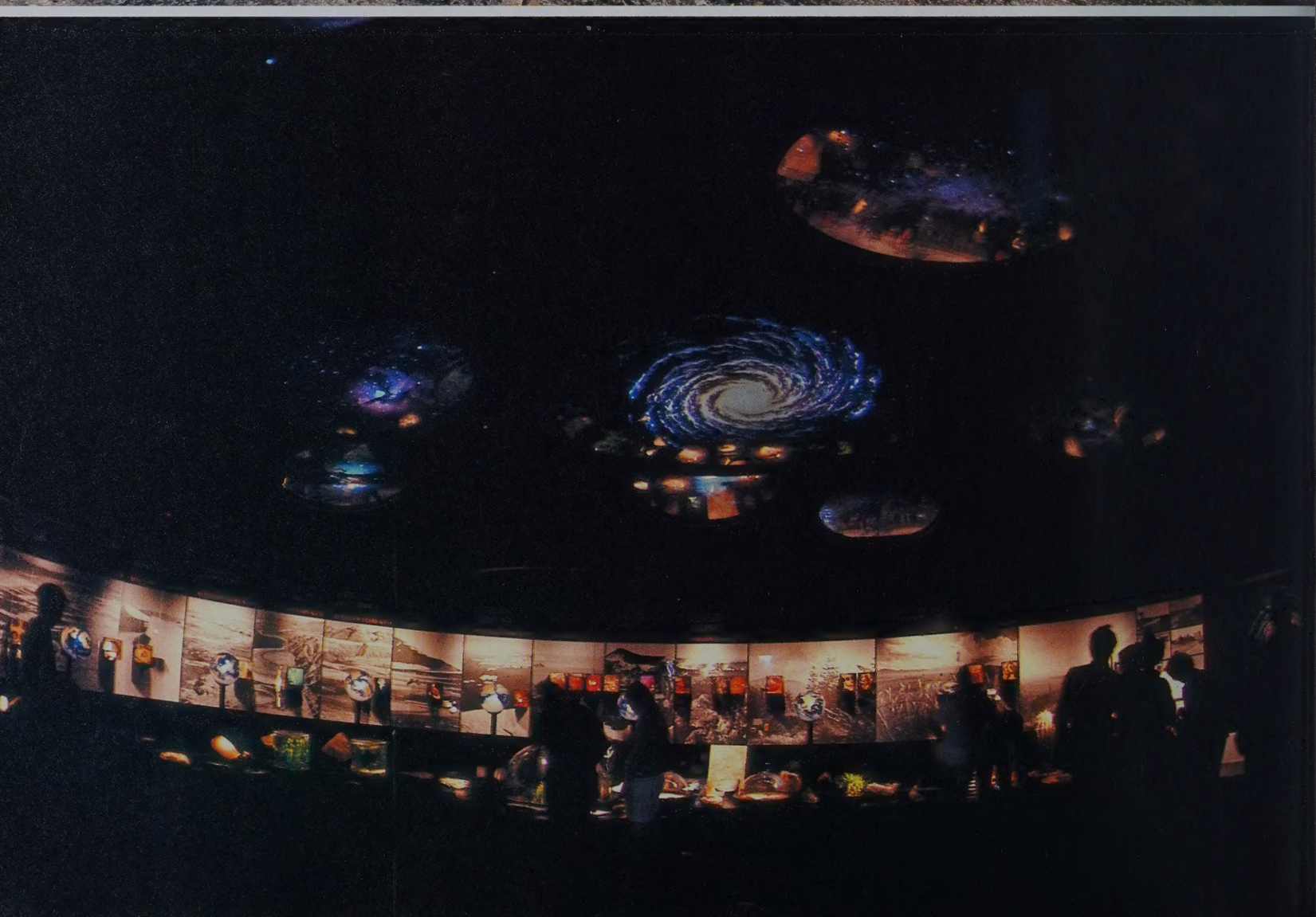
Tom Bean

Herb McReynolds



Gill Kenny

Tom Bean >



All of such sentiment and sense has a home. At about the time Dr. Krutch was charming America with his true tales of "The Mouse That Never Drinks," and "The Contemplative Toad," and "What the Desert is Good For," there came into being an extraordinary institution, the Arizona-Sonora Desert Museum, 14 miles on a paved road from Tucson, Arizona. Two men founded it; today it has a membership of 14,000 across the nation and around the world. Exhibiting methods originated at the Desert Museum have been adopted by numerous other zoological gardens.

"I can't think of another similar institution of its kind that has come so far, so fast, from scratch," says the current director, Dan Davis.

A long-time National Park Service ranger with specialties in archeology, Davis this day could hypnotize us with his years of service at Casa Grande, a four-story tower built by vanished peoples on the desert about A.D. 1350. Before the Hohokams disappeared their culture included 600 miles of irrigation canals (some 75-feet wide and 12-feet deep), ball courts, copper casting methods, and jewelry of turquoise and shell.

But at this moment, Davis is afire with his museum's story. Sixtyish, of mellow baritone, gently:

"Nor do I know of a museum that's so influenced environmentally an *entire region.*

"To my mind, the success is based on *interpretation.*

"As practiced by the Desert Museum, interpretation grows out of at least a half-dozen guidelines. We try to tell a complete story, as related to an individual visitor. We talk to children in their language. Interpretation is revelation, and it must be relevant to what is shown or described. Interpretation can be taught as an art, which it is."

Davis speaks proudly of the Desert Museum's outreach to young people. For nearly a decade special desert exhibit vans have spread the gospel of desert goodness to tens of thousands of children. Docents in lectures at schools have reached 150,000 more. By now some young people have taken four and five field trips apiece. They have grown to become adult naturalists. Daughters of museum docents are now docents.

"Propagandizing," says Dan Davis with a smile, "an entire generation as to the values of the desert."

Such accomplishment, in exactly three decades, begins with the imagination and drive of co-founder William H. Carr. While an associate curator at the American Museum of Natural History in New York, he came to believe that museums and zoos should not just display things, but educate, "as a means of helping man to recognize and assume his responsibilities toward nature in order to gain some hope of insuring his future."

Thus, humanist first and ecologist second, Bill Carr designed an interpretive museum for Bear Mountain State Park on the Hudson River. The goal was to bring nature to the people. The notion now seems almost a cliche, but at the time when zoos were little more than animal prisons, Carr was a revolutionary.

Ill health overtook the man in 1949. On doctor's orders, he was banished to the desert. In four centuries of Old World infiltration, the Sonoran Desert never acquired a better friend.

Carr discerned no wasteland. Obviously, scant moisture fell upon most of the region known as the Sonoran Desert, reaching from the Colorado Plateau to the tip of Mexico's Baja California Peninsula. But this expanse, comprising half the area of Texas, also encircled lush island-like uplands. Everywhere the land supported amazing forms of plant and animal life, loosed powerful if intermittent waters, shoved a shore into the Pacific Ocean, and embraced a vast desert sea, the Gulf of California.

In kinship with Van Dyke, Carr criss-crossed the Sonoran. In a single day, he drove his car from a subtropical palm canyon to a patch of Alpine tundra, climatologically equal to a journey from Mexico to Canada. He observed native fish prospering in landlocked water holes. With binoculars he watched bighorn sheep traverse near-vertical cliffs. He studied a host of ingenious insects and tuned in to a chorus of desert birds. To Bill Carr, such marvels and mysteries were deserving of a tangible, intellectual celebration. He found an angel and ally in Arthur N. Pack, an editor of *Nature* magazine. With his own funds and later with a grant from the American Nature Association, Pack supported planning which led Pima County to offer an abandoned adobe building on the granite slopes above Tucson.

Termite-ridden and vandalized, the structure held little promise. But its setting! Forests of cactus commingled with

(Above) The Arizona-Sonora Desert Museum offers many unique opportunities to its visitors. Here Julie Prchal and a friendly tarantula get a chance to admire each other closeup.
(Opposite page, top) Entrance to the Congdon Earth Sciences Center. Strikingly "real" limestone caves let visitors to the Desert Museum see Nature at work far below the earth. **C. Allan Morgan photos**
(Opposite page, below) The Mining and Geology exhibit is a dynamic look at the geological story from over 5 billion years ago to the present day. Here also visitors can see the Desert Museum's extensive mineral collection. **Harry Redl**

David Burckhalter

Natural beauty, life, and mystery combine to give visitors to the Desert Museum an experience many life-long arid land dwellers never get. Major participants in the marvelous living outdoor world of nature are the coatimundis, left and right, relatives of the raccoon, shown here in their own simulated habitat; the elusive and magnificent bighorn sheep, far right; and the bobcat, below, right, at home in the rocks and crevices of the Small Cat Canyon.

desert shrubs. The panorama from the porch took in a sweeping green-gray valley flanked by six mountain ranges. Carr, Pack, a nucleus staff, and a platoon of volunteers rounded up a few representative animals and flung open the doors on Labor Day, 1952, not knowing whether anybody would show up.

As *Reader's Digest* recalled later, "Cars overflowed the parking lot and spread onto the main road. The animals appeared to like it, too. When the ocelot, jaguarundi, and bobcats were released in their new homes, their appetites doubled. One night a door was left open by mistake, and several beavers went off exploring in the manner of their wild kin. By dawn they had returned. Their footprints in the desert dust revealed that they had strolled out in the moonlight, met a coyote, and then swiftly scampered back to their cage."

The rush of human visitors now totals 7 million, at an annual rate of 600,000. The guests have proven to be a loving lot. So well-mannered are the Desert Museum's visitors, likely it is the only institution of its kind which has never felt the need of hiring guards.

There are city zoos, county zoos, state zoos, large and small. By custom they draw a line around a mental man-made map. But, from the beginning, the Desert Museum assumed a concern not only for the Sonoran Desert but adjoining arid lands. Even across international boundaries.

As if the Sonoran in area and aspect were not enough. The Sonoran: 120,000 square miles, rivaling Death Valley as among the hottest and driest places in North America, the most species-rich of the four deserts of the continent.

But audacious ambition could be the key. In the late 1950s, museum leaders took on the establishment, which had classified the roadrunner as a predator bird subject to year around hunting. The museum solved that injustice by having the roadrunner classified as a migratory songbird subject to federal protection. Likewise protection was extended to the shy, retiring Gila monster—first venomous animal ever to enjoy sanctuary under the law.

Such activities helped the Desert Museum to become one of the few self-supporting natural history institutions in the country, relying entirely upon admissions, memberships, and contributions. Fondly remembered are Pearl Alexander and Mabel Swann, widowed sisters who drove an old car and lived in a small house and bequeathed the museum $600,000. That gift among others helped create and maintain what William G. Conway, then general director of the New York Zoological Society, termed "the most advanced, most sensitive exhibition of live animals on earth."

Exhibits push realism to the extreme and if safe, encourage touching.

The tale is told of an eight-year-old girl confronted by a towering museum ranger, who asks: "Did you touch the desert tortoise back there?"

"N-n-no, sir! Honest!"

"Wouldja like to?" invites the ranger, leading the girl to a close encounter with a docile reptile.

Elsewhere, bobcats, margays, and ocelots lounge about enclosures sculptured and planted like desert gulches. Beavers and otters occupy enclosures seen as desert rivers. Prairie dogs endlessly remodel their subterranean town. Birds of 80 species enliven a walk-through aviary. Along hiking trails flourish 300 kinds of native plants. Sometimes at night, a wild coyote will creep into the unfenced museum grounds and snap up a field mouse. To even the score, one museum bobcat occasionally escapes to hunt in the adjoining desert.

American Education chose the museum for a cover story. *Sports Illustrated* flatly listed the Desert Museum as one of the "five finest zoos" in the nation, with by far the best collection of North American animals. When the British Broadcasting Corporation filmed what it judged to be the world's seven best zoos, only two were named in the United States: San Diego's and the Arizona-Sonora.

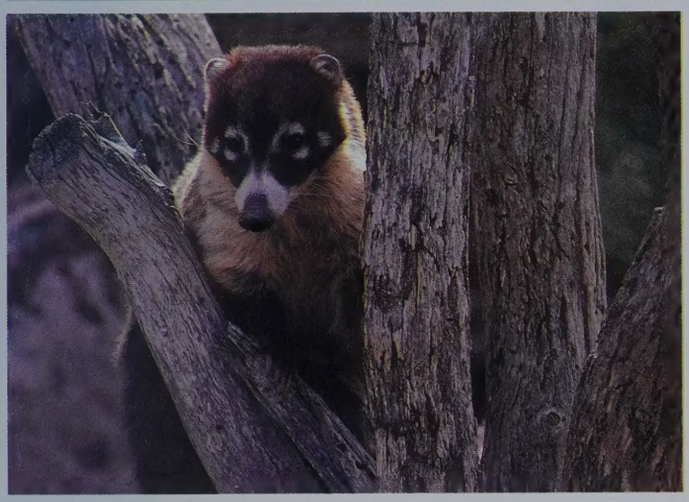
And those accolades preceded the completion of the Desert Museum's latest triumph, the Stephen H. Congdon Earth Sciences Center. At a cost of $700,000, artificial caves of incredible realism honeycomb the earth. Nearly twice as many visitors went through these caves last year than saw the famous Carlsbad Caverns in New Mexico.

The visitors saw: wet and dry limestone vaults complete with stalactites, stalagmites, ledges, and flows; homes of bats and rodents; dramatic presentations of the earth's creation and evolution; exhibits of precious stones and rare minerals; and evolution of myriad life forms. Adventuresome "spelunkers" are encouraged to strike off, Tom Sawyer-like, on steep, narrow detours.

Resins, plastics, paints. Yet so realistic, one recent patron congratulated a museum

David Burckhalter

Val Stannard >



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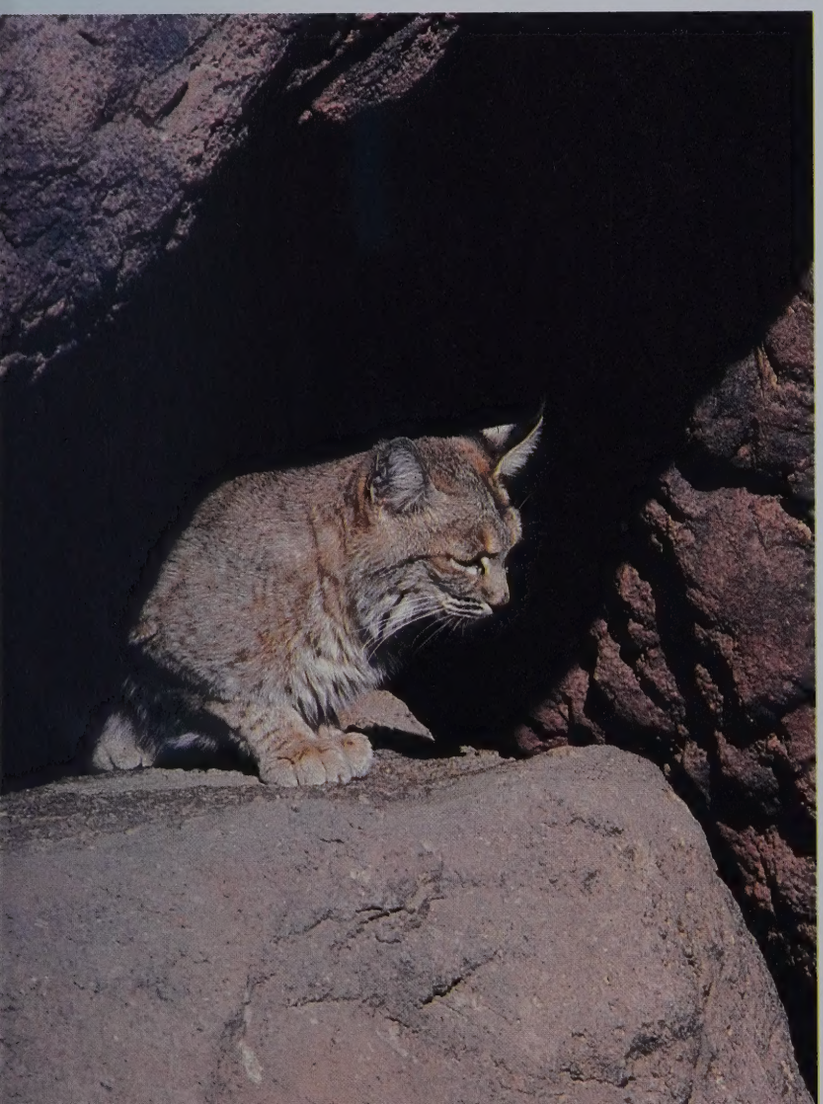
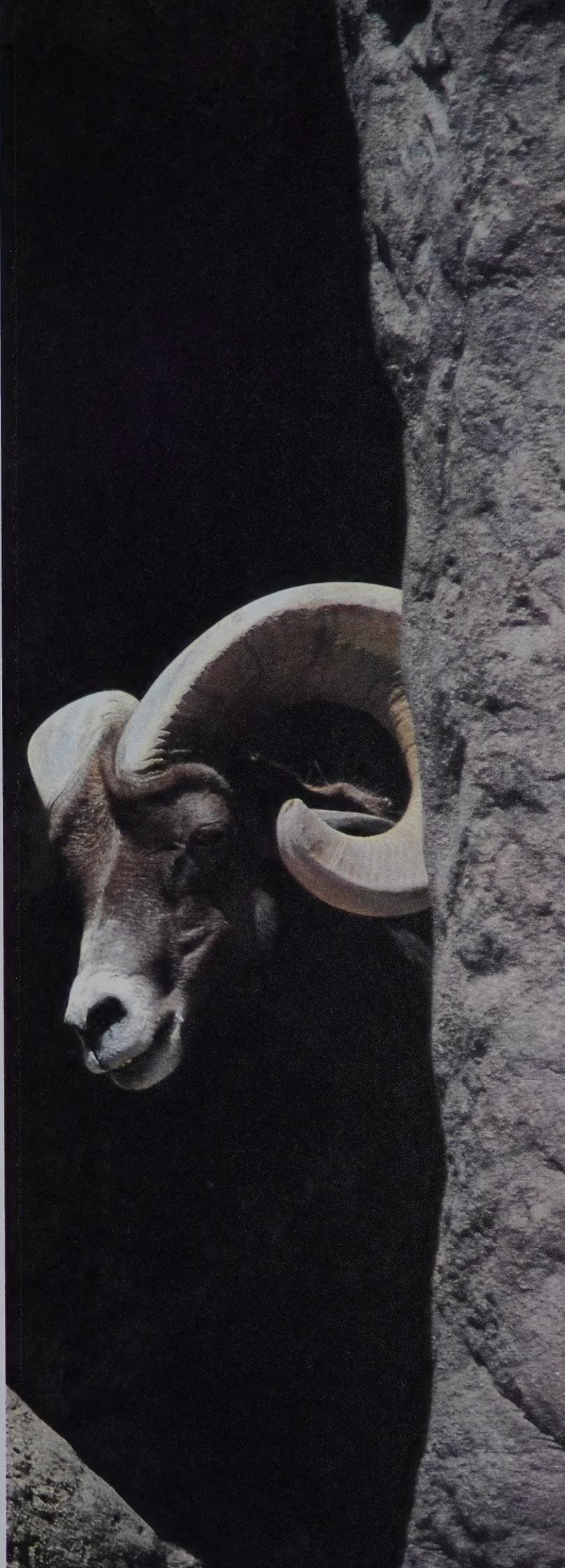
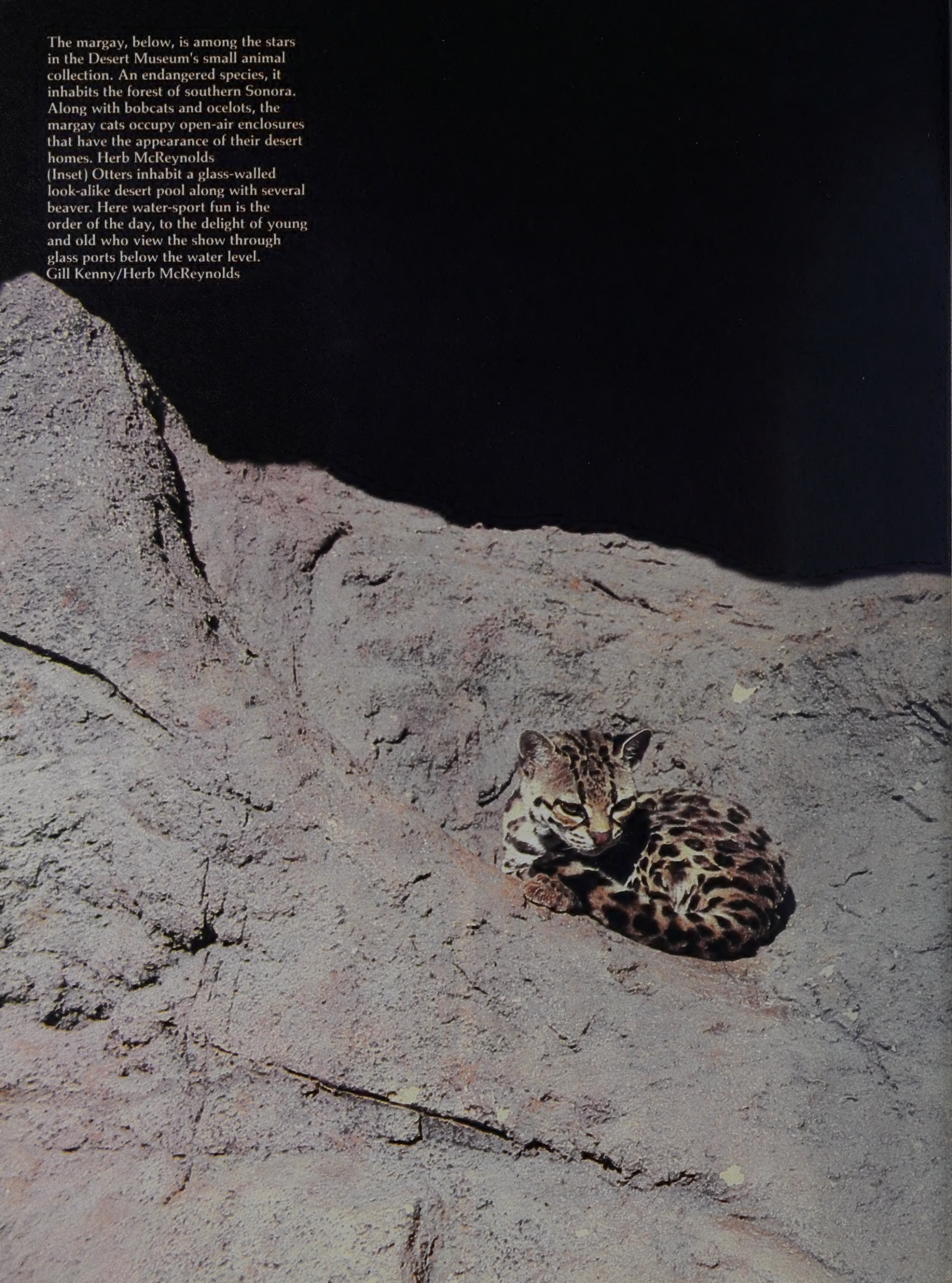
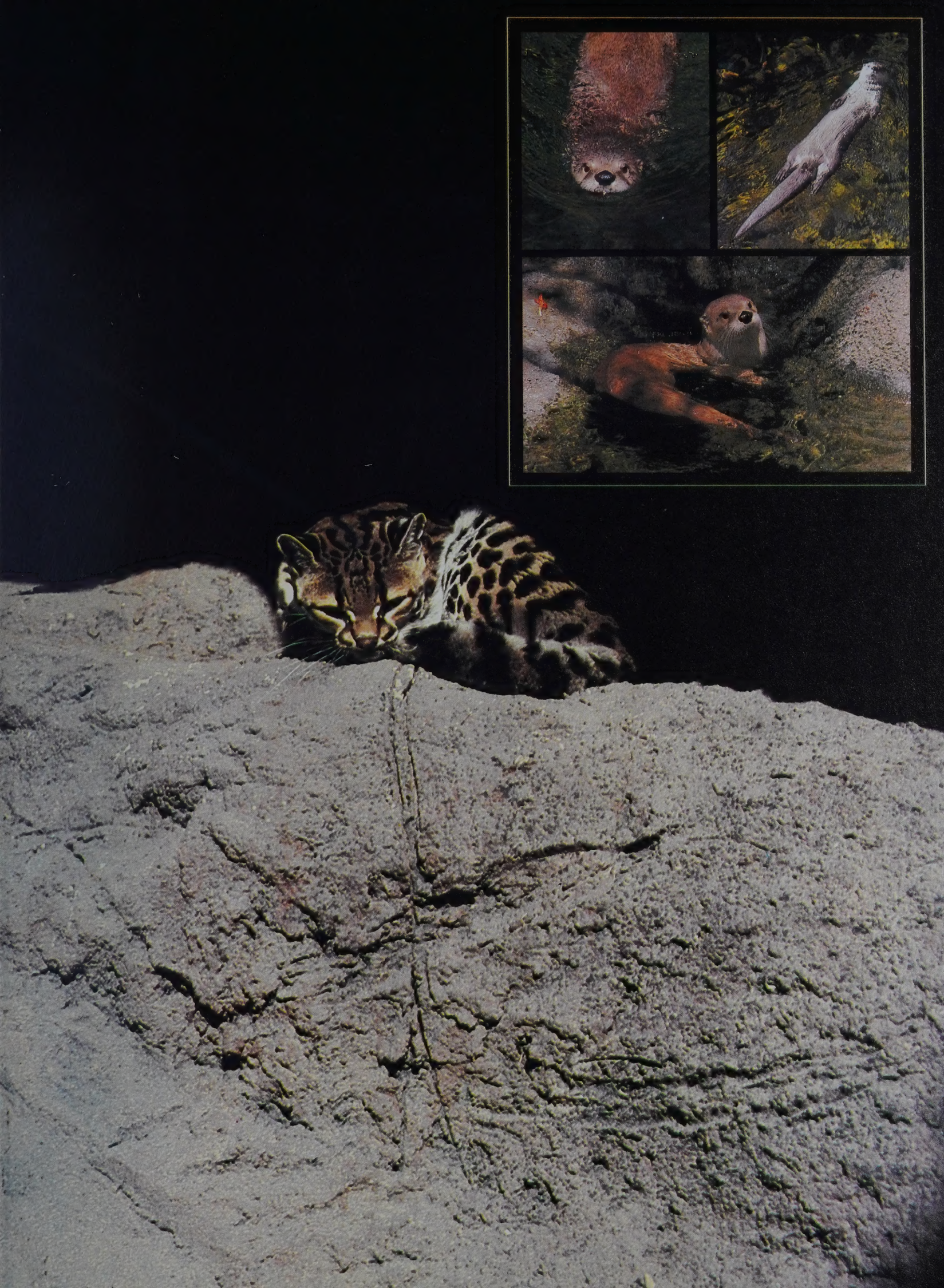




The margay, below, is among the stars in the Desert Museum's small animal collection. An endangered species, it inhabits the forest of southern Sonora. Along with bobcats and ocelots, the margay cats occupy open-air enclosures that have the appearance of their desert homes. Herb McReynolds
(Inset) Otters inhabit a glass-walled look-alike desert pool along with several beaver. Here water-sport fun is the order of the day, to the delight of young and old who view the show through glass ports below the water level.
Gill Kenny/Herb McReynolds





curator on taking advantage "of such fine natural formations so fortuitously located on the museum grounds."

Nor is there a lack of controversy.

Dr. Ingeborg Poglayen shrugs. A naturalized Austrian of later middle age, animal psychologist of world reputation, she clips off an opinion in precise modulated English:

"The animals cannot argue in their own behalf. Who speaks for them? I do, for one."

Inge, at present, is in the thick of the desperate struggle to save the Mexican wolf from extinction. Once it was frequently seen in Arizona. The last was shot in 1963. Now the subspecies holds a precarious niche in the areas of Durango and Chihuahua in Mexico. Even there, the numbers have shrunk to under 50. Only 12 are in captivity and four of those at the Desert Museum.

"It is the perfect example of conflict between civilization and the natural world. Once the wolf preyed upon deer. Then came the cattle, and the wolves turned to calves. Understandably, livestock growers retaliated. There are many poor people. They should have to put up with wolves?

"But won't the richness of the planet's fauna be diminished by the disappearance of such a highly specialized animal? So we try."

She tries to unravel the puzzles of the wolf rank orders, of wolf nursing habits, of wolf murder of wolf.

Some projects are easier. Many "roadside casualties" now come to the Desert Museum for emergency care and recuperation. Some permanently crippled remain. Some of them reproduce and their offspring then return to the wild. Still others, like the thick-billed parrot, defy encouragement to multiply. The museum shelters several pair, and for three years, no chicks.

"I'm stumped," Inge admits. "Is it diet, stress, proper pairing? The animals of our region can at times defy understanding. Usually it's easier to raise African lions in a downtown zoo than it is to make mates of native cats."

On a happier note, other research shows sensational results. Alarmed by steady decline of bird populations of islands in the Gulf of California, The Desert Museum and The California Academy of Science scientists joined with Mexican authorities in discussions which ultimately led to establishment of refuges. Also endangered are sea turtles of the Pacific, off the coast of Mexico. Again in cooperation with Mexico, the museum has conducted research to determine what can be done to save the turtles.

Such sympathy prevails on the American side, too. Animals of the desert mostly are evaders of dryness and heat, although some have devised marvelous means of coping. The desert tortoise magically appears (old-timers swear) when and where it will rain, and drinks a pint of water to last a season. The antelope ground squirrel owes its existence not so much to succulent foliage, as to a possibility of elevating its temperature during the hot part of the day. More amazing is the kangaroo rat which satisfies its water needs by breaking down the carbohydrates of dry seeds, never taking a drink of free water from birth to death, and an especially efficient kidney. The spadefoot toad waits underground in lowlands for rain to form a pond. Then the toad emerges to breed; one month after conception, functioning adults take on enough water to last a year and burrow into the mud for a long sleep.

Birds, too, hew to desert conditions. The Gila woodpecker and gilded flicker excavate well-insulated condominiums in saguaro cactuses. By teamwork, Gambel's quail decoy egg-lusting lizards. In winter and summer, the desert poorwill goes into a torpor, its breath and heart all but stopped.

"Nothing of the desert," adds Inge, "as of life everywhere, is less than miraculous."

Younger, no less enthusiastic, is Dr. Mark Dimmitt, curator of plants. Tall, brown, lean, fiercely mustachioed, 36, he speaks for several thousand species of Sonora Desert plants.

Consider:

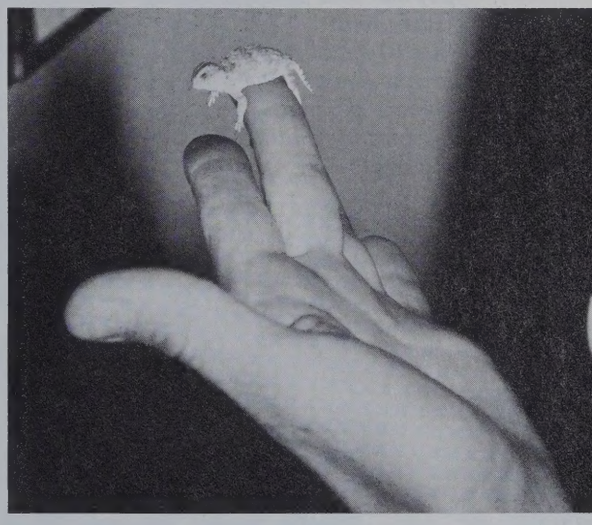
—Unexcelled in economy and patience is a gourd, *Maximowiczia sonorae*, which endures drought as an amorphous mass of gray wood, dry and quite hard. When chance of rain improves, it sticks out a tentative shoot. If it rains, it flowers and fruits. No rain, the shoot shrivels. Then *Maximowiczia* will wait. A year. Three years. Seven years. More.

—Yet within the Sonoran at times wave rolling hills of grass so high one would think he was in Oklahoma. Maybe that's why they filmed the movie *Oklahoma* in the savannahs of Arizona.

—Some desert lilies have gone underground. Others, the yuccas, by evolution have struck mutually beneficial agreements with moths to insure pollination. It is as if individual moths "understand" they must gather pollen and massage it into a flower's stigma, to produce food for the insect's larva.

—Cactus species occur by the hundreds on the Sonoran Desert. They may be fluted (the saguaro) or covered with spines (the cholla). They may be short and fat (the barrel) or oval and flat (the prickly pear). A moisture-storing root beneath the night-blooming cereus may weigh as much as a hundred pounds. The spindly stalk in a single night produces a saucer-sized blossom possessing a fragrance that carries for a quarter of a mile.

—Then, the saguaro. Astonishing in bulk, weighing as much as six tons, a desert giant germinates from a black seed smaller than a pinhead. In 10 years, it may be but a few inches tall, in the shelter of a friendly bush. Two hundred years may pass before the saguaro towers 50 feet with its many branching arms. What irony! that in Arizona recently a man with a shotgun blasted away at such a mammoth, and himself was slain by a falling cactus arm.



The beauty and variety of Sonoran desert plants appeal to the naturalist in everyone but especially visitors to the Sonoran Desert Museum. Here 300 kinds of native species, from the great organ pipe cactus to the smallest wild flower, help visitors to recognize and appreciate the wealth and beauty of the arid regions of the Southwest. Much of it is arranged for a closeup view (opposite page) with pathways lined with native plants, and (above) animal exhibits that encourage "hands on" involvement, as with this tiny lizard. **Gill Kenny/Herb McReynolds**

—Widely distributed, the creosote bush typifies desert adaptation. Small of leaf, it discourages evaporation, but it awaits the lightest rain shower with an extensive root system. Seldom do the bushes grow taller than a man, but it is now revealed that individual plants may be as old as the bristlecone pine, the oldest of living things.

"To me," says Mark Dimmitt, "it becomes a moral or ethical challenge as to whether we should treat with care some plant as odd as the boojum tree, that grows out of the ground like a big carrot. Or the annuals, which cover the desert with wild flowers. Or a species of certain Mexican hedgehog cactus that exists in only remnant pockets.

"An argument can be made for our own self-interest. Humanity hasn't yet proved itself, in geologic time, as say, the shark, or even the dragon fly. Three-fourths of our pharmaceuticals today are derived from plants. There's a strong possibility of some day looking to the desert for raw rubber or quantities of oils for special uses. There is a selfish reason for maintaining species diversity, both in plants and animals."

The philosophy is echoed by former museum staffer, Dr. Richard Felger. He roams the world in search of seeds, which he studies at his museum lab. He interviews desert people from Israel to Australia for insights into past uses of arid plants as sources of food. He makes a career of his favorite subject, "foods of the future from ancient plants."

On the Sonoran Desert alone, Dr. Felger points out, prehistoric peoples utilized some 450 species of plants as food. Why clear land and flood it with water and spray insecticides, when the same land potentially could yield harvests of precisely adapted native species?

"More research is needed," says he, "but the day may come when we will turn to the deserts of the world for the very foodstuffs of survival."

In furtherance of such outlooks labors Muffin Burgess of the museum's office of education. From its inception, the Desert Museum has led field trips for members and visitors, and today the program has grown to a year around curriculum. Young, pretty, and enthusiastic, Muffin is asked to run down a list of her favorite excursions into understanding.

"Oh, my," says she, rolling her eyes. "There are so many. But I really enjoy our saguaro harvest week in June. We join our friends, the Papago and Pima Indians, as they harvest the fruits of the giant cactus. They use long poles to knock down the fruit, and we have a chance to taste and learn about native foods.

"Our 'nightstalkers' time in July brings out people who want to see the desert at night, when much of it is most active. Nocturnal creatures are seen for the first time in some setups under black light.

"A program we call 'Man and the Land' is intriguing. We make a tour of various places where great change is occurring and has occurred in urban areas. We try to appreciate what has happened, so that future change might be put into perspective.

"A favorite trip of my own is to the Pinacate volcanic field in El Gran Desierto of Mexico, near the mouth of the Colorado River. That's about 5000 square miles of the most desolate land in the Sonoran Desert.

"And there's so much more—survival schools, high mountain study hikes, float trips through the Lower Grand Canyon, a tour of Sonora's northeastern Sierra. But sometimes I feel a greater reward from a simple half-day stroll leading a casual group down a desert wash. Not long ago, I was with such a group doing the 'Anatomy of an Arroyo,' and one woman blurted out, 'I've lived here 40 years and I didn't know that!' "

(Below) Beautifully painted ceramic tiles serve as identifiers for the many different bird species in the aviary, a popular and peaceful spot.
Harry Redl
(Right) Artist Nick Wilson is responsible for the Desert Museum's prize-winning posters which dramatize the exotic and fascinating wildlife of the arid lands of the Southwest.

When there were only a few 40-year-old veterans who *didn't know that*, perhaps it didn't matter.

But people keep coming to the desert, in accelerating numbers. At statehood in 1912, the population of Phoenix reached 22,000, and the class graduating from the one high school consisted of 31 boys and 17 girls. "Main 6" sufficed as the telephone number of the cold storage plant. The sharpest banker in town forecast that "by the year 2000, Phoenix could well be a city of 100,000." By 1955 Phoenix still was small: 155,000 people in 29 square miles. Today the city nudges a million. Tucson similarly has grown. Development and recreation reach into the desert, leading a thoughtful writer to ask his fellow residents and visitors, "Can the desert survive you?"

At a time of great human development and attendant problems, the Desert Museum provides a forum for the natural elements of an entire region to speak in reasoned tongues. The population of the six states in the southwestern quarter of the United States has jumped more than 40 percent to some 30 million in the past 15 years. Water shortages already have brought rationing in some areas, and outright abandonment of farmland in others. In reclaiming its own, the desert teaches humankind a hard lesson.

William H. Carr lives on, as spritely director emeritus of his Desert Museum.

In his book, *Pebbles in Your Shoes*, he refers to his museum as "my beloved child." At it's birth he said, "The *idea* we are thinking here is outdoor conservation education as typified by the Arizona-Sonora Desert Museum . . . education employed as a means of helping man to recognize and assume his responsibilities toward Nature in order to gain some hope of assuring his future. The time for widespread implementation of this kind of endeavor is *now;* before man succeeds in totally defiling his habitat and making it unlivable."

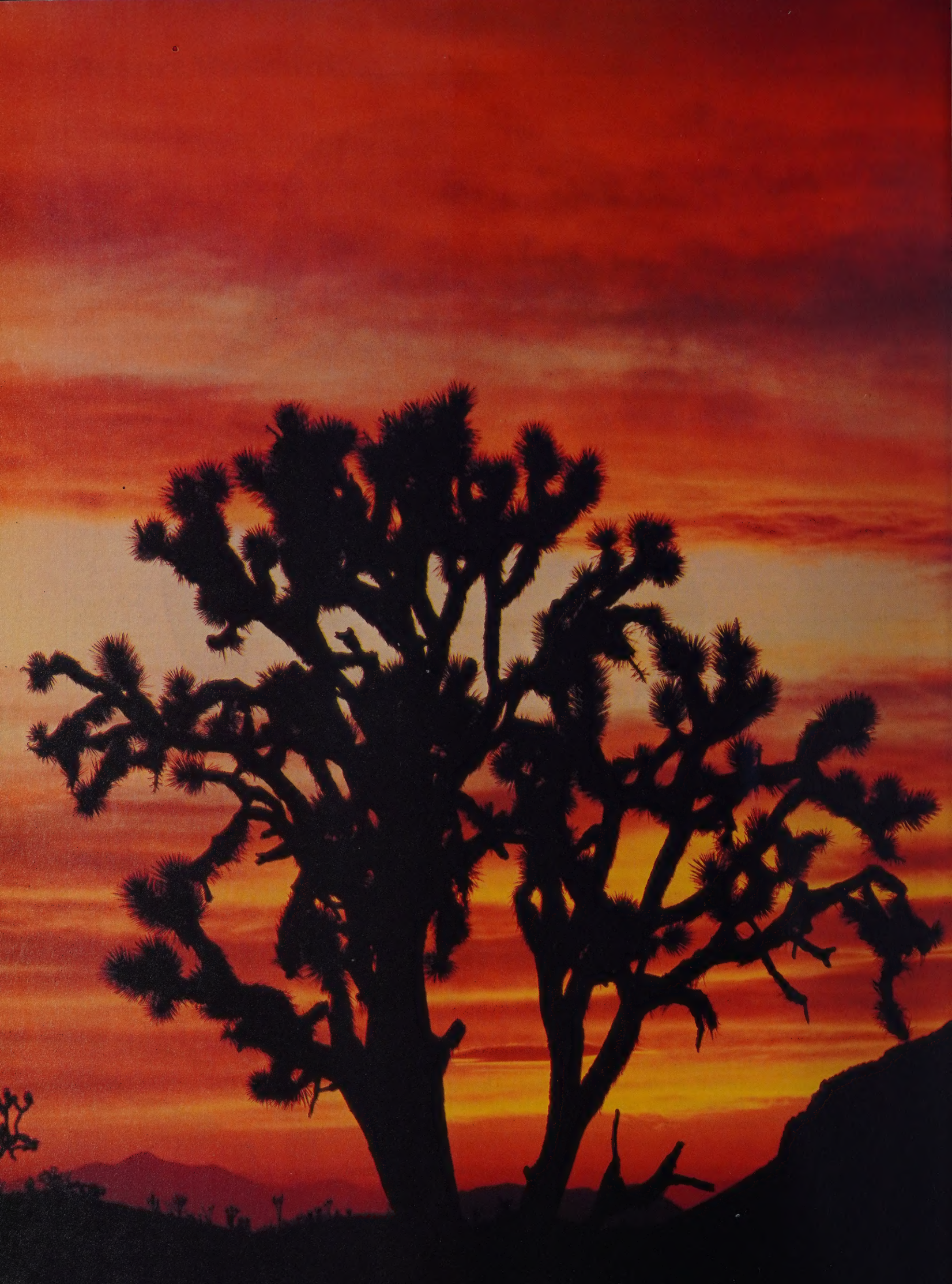
For as Dr. Krutch (first secretary of the Desert Museum) lectured in *The Desert Year,* the arid land reveals that ". . . courage is admirable even in a cactus; that an abundance of good things is perfectly compatible with a scarcity of others; that life everywhere is precarious, man everywhere small."□

To humans who are tired,
worried, or discouraged,
I bequeath the silence,
majesty, and peace of our
great American desert...

To those who walk the trails,
I bequeath the early morning voices
of the birds and the glory
of the flowered desert in
springtime...

...the world so needs these things.

Epitaph for a Mountain Lion, by William H. Carr, director emeritus, Arizona Sonoran Desert Museum.



Bookshelf

by Mary Lu Moore

***Inquiries about any of these titles should be directed to the book publisher not* ARIZONA HIGHWAYS.**

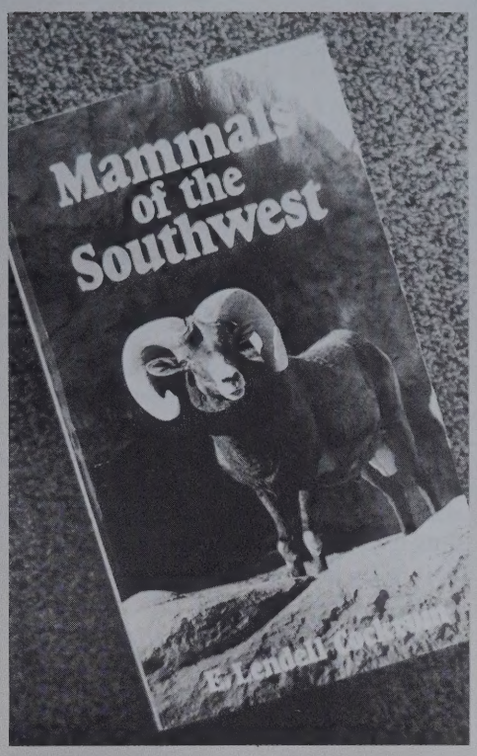
MOUNTAIN ISLANDS AND DESERT SEAS: A NATURAL HISTORY OF THE U.S.—MEXICAN BORDERLANDS. By Frederick R. Gehlbach. *Texas A&M University Press, Drawer C, College Station, TX 77843. 1982. 298 p. $19.95, hardcover.*

The natural diversity of the southwestern Borderlands is unparalleled. Through the words of the author, we tramp the canyons, lowlands, woodlands, and mountains, noting with his eyes all the subtle changes in vegetation, animal life, and geology. Plant communities and various birds and animals take on personalities of their own. A naturalist by profession, Dr. Gehlbach has travelled most of the area on foot or on horseback. Thus, nearly all that he recounts he has experienced firsthand, particularly in the habitats he cherishes most. He recalls the dynamic history of man in the Borderlands region and encounters the legacy of man's past and present negligence. Without belaboring the issue, the author warns that availability of water is the ultimately limiting source of man's activities in the desert. He leaves his readers with some sobering philosophic observations of his assessments and with his outlook and recommendations for the future.

In sum this volume is one man's perceptive, educated, personal account of his encounter with the natural (and sometimes unnatural) environment which he strives to understand and then interpret to others. The well-written text is supported by color photographs, many black-and-white illustrations, three aerial maps, and a meticulous index. This is deeply rewarding reading for those even mildly interested in the environment and the region from the mouth of the Rio Grande to California's Imperial Valley.

MAMMALS OF THE SOUTHWEST: By E. Lendell Cockrum. *University of Arizona Press, Box 3398, Tucson, AZ 85722. 1982. 176 p. $11.95, hardcover; $5.95, softcover.*

The inspiration for this comprehensive, authoritative guidebook came from pen-and-ink drawings by the late Sandy Truett. She provided the sensitive, true-to-life illustrations, and Dr. Cockrum, an internationally known authority on desert biology and ecology, supplied the data. Arrangement is by biological order, then by family within each order. For all 80 entries there are: common and scientific names; identifying features; English and metric measurements; habitat; life habits; related species, if any; one of Truett's line drawings; and a map showing geographic distribution in the area of Arizona, New Mexico, southern Utah and Colorado, West Texas, and northern Mexico. The author provides a list of suggested readings and a convenient index to species. This handy pocket-sized resource will serve the needs of those wishing to identify and learn about the varied species of mammals in Arizona and the Greater Southwest.



A lone Joshua tree stands guard over the ancient sands of Detrital Valley, in the Cerbat Mountains near Kingman, northwestern Arizona. **David Muench**

HORNED LIZARDS: UNIQUE REPTILES OF WESTERN NORTH AMERICA. By Wade Sherbrooke. *Southwest Parks and Monuments Assn., P.O. Box 1562, Globe, AZ 85501. 1981. 48 p. $8.95 plus $1.50 mailing.*

The "horny toad" has been a beloved desert dweller since prehistoric times. Its adaptability to temperature and terrain is truly amazing. The horned lizard's complete life history, geographical distribution of species, and role in the life and art of man are eloquently detailed in a highly readable narrative and in vivid color photographs, maps, and diagrams. There is a list of related readings and a chart of horned lizard species found in U.S. National Park Service areas. Thanks to Sherbrooke, a graduate zoologist and arid lands specialist, the seven species of horned lizards in the western United States take on significance and personality as we follow them through their lives in the arid regions of the West.

DEATH VALLEY: THE STORY BEHIND THE SCENERY. By William D. Clark. *KC Publications, P.O. Box 14883, Las Vegas, NV 89114. 1980 rev. ed. 48 p. $7.95, hardcover; $3.00, softcover.*

Death Valley: awesome in its vistas, beautiful in its landforms and spring flowers, devastating in its searing summer heat. These moods and more are captured in the magnificent color photography used so effectively throughout the book. The interesting and authoritative text surveys the Valley's vivid geological formations, surprisingly wide variety of plants and animals, unusual mining history, and, of course, "Death Valley Scotty" and his castle. The publication is flawed only by lack of mention of the remarkable F.M. "Borax" Smith, whose mining and railroad endeavors opened up Death Valley and made "Twenty Mule Team Borax" household words. For those who seek to know and understand this incredible desert monument, Clark's account is a must.

—Reviewed by Judson Farquar

INTERNATIONAL WATER USE RELATIONS ALONG THE SONORAN DESERT BORDERLANDS. By Milton H. Jamail and Scott J. Ullery. (Arid Lands Resource Information Paper No. 14.) *Office of Arid Lands Studies, University of Arizona, 845 N. Park Ave., Tucson, AZ 85719. 1979. 139 p. $10.00, softcover.*

In the Sonoran Desert there are no more crucial issues than those of availability of water, its quality, and its use. In an important major document on these vital subjects, the authors examine U.S.-Mexican water policies and relations and the attendant difficulties of resolving problems and conflicts arising from the artificial boundary which cuts across mountains and rivers irrespective of river basins. Thoroughly reviewed are various ramifications of water policies, stark realities of competition for water use on both sides of the international border, severe pollution—including appalling sewage disposal problems, conflict over groundwater sources, and increasing lack of sufficient water for all people and needs. Jamail and Ullery also note the significant influence of political considerations which overshadow sound water management. There are an exhaustive computerized bibliography, photos, a map, keyword and author indexes, and many additional references. Here is a substantial contribution to understanding a key problem which menaces the entire arid Southwest, and which so far has eluded binational solution.

Yours Sincerely

Comments and questions from around the state, the nation, and the world.

Dear Editor,

Thank you very much for your article about General Crook's Trail. We had already planned a camping trip to Woods Canyon Lake and when we read about the trail, decided to make it part of our trip. We travelled 40 miles along FH300. The sights were magnificent, and we felt a thrill seeing parts of the original trail. It was almost as if we had been transported back in time 100 years. Your magazine was like a tour guide for us. We plan to take another camping trip to Lake Powell and will be taking the April, 1982, *Arizona Highways* magazine with us. Thank you for bringing out all the good in our state. We are proud to live here.

Michelle & Bill Kolbe
Glendale, AZ

Dear Editor,

When the July issue of *Arizona Highways* was delivered by the postman all activity, as usual, came to a halt until it was perused from cover to cover. In continuing perfection year after year, the July, 1982 issue stands out as super-perfect. The history in this issue (history which is amazing and very interesting) makes the story of General George Crook and how he got along with the Indians a story of which every American can be very proud. And, of course, the Cooley part of the story is very important. We will hope to have more history—including the Cooleys—in future issues.

Frank E. Cooley, Jr.
Fort Thomas, KY

Dear Editor,

A couple of years ago, my son, who lives in Phoenix, enhanced my life with a Christmas gift subscription to your outstandingly beautiful magazine. As an avid outdoorsman, I look forward to each month's copy, and read it from cover to cover. I am only let down when I reach the last page and realize that I must wait a month for the next issue. Your July, 1982, issue was superb, and I feasted my eyes on every detail of each picture. Hurry with my next copy.

James Frazer
Flandreau, S. D.

Dear Editor,

The selection of articles (July, 1982) on the historic General Crook Trail were superlative. Located in one of the most beautiful areas of the state, it's ironic that the trail hasn't received more exposure since 1976. Having traveled most of the trail by horse, covered wagon, or pickup, I believe that some of the Crook personality still exists on the trail. The past presence of the General's dominant personality and decisive command leaves an impression that all the ghosts haven't left the trail yet. My American History classes (last spring) invited Mr. Bowman to accompany us on horseback and covered wagon along the historic trail. The western intrigue and historic flavor he added to our trek was similarly duplicated in your July issue. Naturally, "there's nothing like the real thing," but for those unable to actually experience the trail, Mr. Bowman and your staff did an outstanding job of portraying it.

R.L. Kastelic
Scottsdale, AZ

Dear Editor,

I can't find words to praise your magazine highly enough. Your writers and photographers are superb... marvelous. I feel as if I am there when I read the articles and enjoy the beautiful pictures. I am a city person, but love to live (in my mind) on the ranches of Arizona. One article which moved me to tears of joy was in your July, 1982, issue. It was "The Green, Green Grass of Home" by Joan Baéza and photos by Wayne Davis—about the Wilhelm family. I could close my eyes and see it all. Thanks for the many years of pleasure I have received from *Arizona Highways*.

Mary E. Kemper
Lakewood, CO

Dear Editor,

The articles concerning General Crook's Trail in the July issue are especially thrilling for us. General Crook was my husband's great-great-great uncle. We have visited Arizona many times with most of the time spent in sightseeing the many places you so beautifully portray in your magazine. So many of the historic displays and museums mention General Crook—much to our delight. Examples: Ft. Lowell in Tucson and Cochise Visitor Center in Willcox.

Barbara Thoma
Dayton, Ohio

Dear Editor,

We had most of our two week June vacation planned when the "Welcome to Flagstaff Country" issue of *Arizona Highways* came. We were going to spend some time in New Mexico but really hadn't decided how we would get there. After reading the June issue detailing all the places in Flagstaff to visit, our route was established. We visited both Meteor and Sunset craters. We spent time at the Coconino Center for the Arts, Pioneer Historical Society Museum, The Museum of Northern Arizona, and, while on the campus of Northern Arizona, we saw the J. Lawrence Walkup Skydome. It all boils down to one thing: spending just a few days in Flagstaff is not hardly enough. We are already talking of our next trip there.

Bob & Barbara Conner
Bellflower, CA

Dear Editor,

From a temporarily transplanted Arizonan, a belated thank you for your beautiful March, 1982, issue with the outstanding pictures of Arizona in bloom. After a soggy winter and spring, the Alpine wild flowers are in bloom but can't hold a candle to the ones we love and remember well from the desert. By sharing our treasured copies of *Arizona Highways* with Swiss friends, they are learning that there's more to the United States than New York, Las Vegas, San Francisco, and Dallas. Prepare for tourists!

Jane F. Blaisdell
Zurich, Switzerland

Dear Editor,

Our family just returned home after a three-week stay in upstate Arizona. It is 1:45 a.m., and I find myself delightedly flipping pages of past *Arizona Highways* when I should be sleeping! There are things I'll never forget—the special magic of the sycamore's bark done in pastel tints on white, the fragrance of the velvet mesquite, the majestic rustle of the Verde River cottonwoods, or the "feeling" of the Grand Canyon. And then the human things like Tlaquepaque in Sedona and the World's Oldest Rodeo at Prescott, and fascinating Indian ruins with strange sounding names like Tuzigoot and Wupatki. What a joy it will be to share all I've seen and learned with my school children here in Missouri. Your magazine will help me do that.

Norma Marshall
Grain Valley, MO

(Back cover) Soaptree yuccas (Yucca elata) *in the dry grasslands near Dragoon, southeastern Arizona. Time loses meaning here, where the only clock is dawn and dusk and the sound of the sighing wind.* **Ray Manley**

Electric Blue, *By Ann Taylor. Oil on canvas, 46 by 42 inches. Courtesy of the C. G. Rein Gallery, Scottsdale, Arizona.*

Your spirit is a part of widening space.
For you have lived content
Encompassed with its silence and its quiet –
Where changing patterns flow along horizon's rim
To sweep in all-pervading beauty
On and on.

–Unknown